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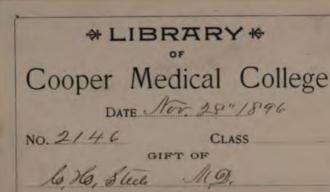
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THE YEAR-BOOK OF TREATMENT

1890



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YEAR-BOOK OF TREATMENT FOR 1890.

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YEAR-BOOK OF TREATMENT

FOR

1890.

A CRITICAL REVIEW FOR PRACTITIONERS OF MEDICINE AND SURGERY.

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PREFACE.

THE object of this book is to present to the Practitioner not only a complete account of all the more important advances made in the Treatment of Disease, but to furnish also a Review of the same by competent authorities.

Each department of practice has been fully and concisely treated, and care has been taken to include such recent pathological and clinical work as bears directly upon Treatment.

The medical literature of all countries has been placed under contribution, and the work deals with all the more important matters relating to Treatment that have been published during the year ending September 1st, 1889.

A full reference has been given to every article noticed.



CONTENTS.

	PAGE
DISEASES OF THE HEART AND CIRCULATION. BY J. MITCHELL BRUCE,	
M.D., F.R.C.P	1
DISEASES OF THE LUNGS AND ORGANS OF RESPIRATION. BY E. MARKHAM	
Skerbitt, M.D., F.R.C.P.	22
DISEASES OF THE NERVOUS SYSTEM. BY JAMES ROSS, M.D., LL.D.,	
F.R.C.P., AND ERNEST SEPTIMUS REYNOLDS, M.D., M.R.C.P.	48
DISEASES OF THE STOMACH, INTESTINES, LIVER, ETC. BY SIR DYCE	
DUCKWORTH, M.D., F.R.C.P., AND ROBERT MAGUIRE, M.D.,	
F.R.C.P	67
DISEASES OF THE KIDNEY, DIABETES, ETC. BY CHARLES H. RALFE,	
M.A., M.D. CANTAB., F.R.C.P.	89
RHEUMATISM AND GOUT. BY ROBERT MAGUIRE, M.D., F.R.C.P.	109
MEDICAL DISEASES OF CHILDREN. BY JAMES F. GOODHART, M.D.,	
F.R.C.P	119
CONTINUED FEVERS. BY SIDNEY PHILLIPS, M.D., M.R.C.P	134
GENERAL SURGERY. BY FREDERICK TREVES, F.R.C.S	149
ORTHOPÆDIC SURGERY. BY W. J. WALSHAM, F.R.C.S	168
SURGICAL DISEASES OF CHILDREN. BY EDMUND OWEN, M.B., F.R.C.S.	180
DISEASES OF THE GENITO-URINARY SYSTEM. BY REGINALD HARRISON,	
F.R.C.S.	106
VENERRAL DISEASES. BY ALFRED COOPER, F.R.C.S.	208
Two Desires on Wover Pr D Penns Hans MD F D CD Fo	000

viii T HE	YEAR-B	оок	OF 1	'REA'	TMEN	T.				
MIDWIPERY, BY GEORGE	e Ernes	sт Н е	RMAN	, М.	в., 1	e.R.C	.P.			PAGE 231
DISEASES OF THE SKIN.	By Ma	LCOLM	т Мо	RRIS,	F.R	.C.S.,	ED.			254
DISEASES OF THE EYR.	Ву Нвя	RY P	OWER	, М.	В., Б	R.C.	s.			268
DISEASES OF THE EAR.	Ву Се	ROE I	. Fı	ELD,	M.R	.C.8.				279
DISEASES OF THE THRO	DAT AN	o No	SE.	Вч	Р.	МсВв	IDE,	M.D).,	
F.R.C.P.E., F.R.	S., Edi	N						•		289
SUMMARY OF THE THERAI	PEUTICH	ог ти	e Y	EAR I	888-	9. I	35 W	ALTE	R	
G. Smith, M.D.			•		•	•				299
INDEX TO AUTHORS QUOT	LED									315
INDEX TO SUBJECTS .										319

YEAR-BOOK OF TREATMENT

FOR 1890.

DISEASES OF THE HEART AND CIRCULATION.

By J. MITCHELL BRUCE, M.D., F.R.C.P.,

Physician to Charing Cross Hospital, and to the Hospital for Consumption, Brompton.

L—GENERAL THERAPEUTICS OF THE CIRCULA-TORY SYSTEM.

THERE is abundant evidence that the treatment of diseases of the circulation has been steadily advancing in a more rational direc-tion during the past twelve months. Instead of searching for therapeutical novelties, we have been applying with greater care the many valuable measures which we already possess for influencing the circulation, and have been bringing to bear upon our clinical problems the steadily increasing knowledge of the physiology and pathology of the heart and blood-vessels. The physiology and pathology of the heart and blood-vessels. thoroughly practical value of this kind of progress is well illustrated by the first abstract which we present—a résumé of a clinical lecture by one of the highest authorities on our present subject. In connection with the acute diseases of the heart, especially such as accompany the acute specific processesdiphtheria, scarlet fever, pyæmia, etc.-a growing appreciation is manifested in the medical literature of all countries-French. German, American and English-of the paramount importance of protecting the myocardium and sparing the cardiac energy, not only by attention to rest, nourishment and stimulation, but also by avoiding depressing remedies, such as pilocarpine, and the many kinds of meddlesome local treatment for these diseases which have lately been so much in vogue.

With respect to functional disorders of the heart, it cannot be too clearly remembered that these are a heterogeneous group of troubles without a common pathological connection-some toxic in origin (gout, rheumatism, tea, tobacco, etc.); some reflex (uterine, ovarian, etc.); some of cerebral (mental) origin; others "hæmic," and so on. Manifestly it is necessary to exercise great "hæmic," and so on. caution in drawing conclusions as to the relative value of drugs in cases of this varied description.

1. Therapeutics of heart disease.
Professor Da Costa (Amer. Journ. of Med. Scien., Nov., 1888),
in discussing very fully the treatment of valvular disease of the heart, and speaking of the value of digitalis in failing compensation, says that in these cases it is assumed that the muscular fibre of the heart is not in a state of degeneration. granular, fatty, waxy or fibroid change takes place, the treatment is still the same, though there should be a freer exhibition of tonics and stimulants. We do not now, however, get the same results from digitalis or kindred agents; and arsenic or strychnine is always worthy of a trial. These are difficult cases to treat. another class of cases, excessive growth of the myocardium and powerful action call for aconite and veratrum. This state is most often met with in aortic regurgitation. Aconite is then preeminently the remedy; it diminishes the blood pressure in the arterial system and gives great relief. Two-drop doses of the tincture are given every fourth or sixth hour for the first few days, then only twice a day. Dr. Da Costa speaks highly of a combination of one-drop doses of aconite tincture, with three of tincture of veratrum viride, and seven of tincture of ginger; this, he says, is an admirable sedative, and does not sicken. Food in cardiac disease should be nutritious, easily assimilated, and never taken in large quantities at a time. There is no objection to the use of tea and coffee, if not excessive; and small quantities of alcoholic drinks are rather beneficial than otherwise in inadequate or faltering compensation. Except for gouty persons, we may hold to this axiom, that it is right to allow alcohol in cases in which we think digitalis applicable. Dr. Da Costa is not favourably inclined towards Oertel's mountain climbing plan of treatment. Among the substitutes for digitalis, he regards caffeine, strophanthus, and adonidin as the best. From adonidin in onetenth to one-fifth of a grain doses, three times a day, he has witnessed some admirable results, but more in cases of functional than of valvular disease of the heart. Strophanthus he has seen favourably influence irregularity and dyspnera, but as a diuretic it is inferior both to digitalis and caffeine.

convallaria he has had, in common with others, disappointment in valvular affections, though he has found it of value in functional disorder. Cocaine has proved to be a cardiac stimulant and tonic not devoid of diuretic powers. Chloride of barium in one-tenth of a grain doses in full form has shown itself to be a general tonic and a cardiac tonic, a remedy that increases the tone in the blood-vessels, and a fairly good diuretic. Among its properties, it has been found to lessen

cardiac pain.

Dr. Graham Steell (The Practitioner, September, 1889) in a paper on "Aortic Disease of the Heart," says that for restoring the vigour of the heart-muscle when it fails in aortic obstruction, no drug has yet eclipsed digitalis, and when the left ventricle is weakened in this form of valvular lesion its employment is strongly indicated. The administration of digitalis in this disease requires, perhaps, more than ordinary care and watchfulness. He unhesitatingly affirms his belief, as the result of his clinical experience, that aortic incompetence offers no contra-indication to treatment by digitalis. Failing heart-muscle is the great indication for its employment. He has never found digitalis useful in cases where the effects of the lesion did not travel beyond the left ventricle, and this chamber was able to do the extra work

imposed upon it.

When aortic incompetence puts on the aspect due to a failing heart-muscle we may expect the best results from digitalis, provided the cardiac muscle has not become so much degenerated as to render its response to the drug impossible. On the other hand, patients with aortic incompetence are liable to attacks which, for lack of a better name, may be called "asthmatic." In these the patient sits up in bed, with anxious livid countenance, forehead perspiring, breathing laboured, the characteristic features of the pulse, which is often small, hardly recognisable, and the heart-sounds obscured by abundant rhonchi. For these seizures, which appear to be associated with failure in the power of the left ventricle, alcohol, given very freely during the critical period, is unquestionably the most valuable remedy we possess. Spirits of ether and ammonia are no doubt useful, but we must trust chiefly to alcohol, as their action is evanescent. Digitalis should be given from the first in full doses, but its beneficial effects will be exerted later than those of alcohol, and will be continued after the crisis is over. Champagne and brandy in combination perhaps constitute the best form in which to administer alcohol in a cardiac emergency, but spirits alone, simply diluted with water, act efficiently enough.

2. Sudden heart failure in acute disease.

Dr. Jacobi (Archives of Pediatrics, March, 1889), writing on the treatment of diphtheria, especially inveighs against the danger of giving large doses of chlorate of potassium. great danger in cases of diphtheria is from failure of the heart. and this should never be lost sight of-no matter how mild the case may seem to be. The patient must, therefore, always be kept in bed, and as quiet and free from excitement as possible. A cardiac stimulant, such as digitalis, may be administered as a matter of routine; or, when rapid action is desired, sparteine Alcoholic stimulants should always be given, and may be used. when actual failure has occurred or is threatening they should be given with a very free hand.

Dr. J. Lewis Smith (Journ. Amer. Med. As., December 8, 1888). in a discussion on this subject at the New York Academy of Medicine, speaking of the treatment of cardiac paralysis, said that it was evident, from the nature of the trouble, that it must be combated promptly and with the most active remedies. patient should be kept quiet in bed, with the head low, and alcoholic stimulants administered at once. In sudden seizures hypodermic injections of brandy act most promptly in sustaining the heart's action. Ammonia, camphor, musk, and electricity are also of service, as well as the predigested beef preparations, peptonised milk, and other concentrated foods designed for those with feeble If the urgent symptoms are relieved by these digestion. measures, such remedies should be employed as are useful in other forms of diphtheritic paralysis,

Dr. Jacobi (Archives of Pediatrics, December, 1888) says that it is a good rule to give moderate amounts of digitalis, strophanthus, convallaria, sparteine or caffeine in the failing heart of

typhoid fever in the child.

Digitalis and strophanthus may derange the stomach after a while; digitalis may not act quickly enough under certain circumstances. In such a case sulphate of sparteine, which is readily dissolved, absorbed, and eliminated, in doses of one-tenth to one quarter of a grain every two or four hours, will render good services. Caffeine must not be given when there is hyperæmia of the brain. The sodio-benzoate and sodio-salicylate of caffeine dissolve readily in two parts of water, and are reliable aids in sudden attacks of heart-failure for hypodermic administration. Camphor internally will answer well either in the presence or in the absence of pulmonary complications. In cases of emergency its subcutaneous administration works admirably in either ether or almond oil, the former in ten the latter in

twenty per cent. solutions. The latter is less painful, and obstructs the instrument less readily. Carbonate of ammonium disorders the stomach more frequently than camphor is apt to do. Muriate of ammonium has no stimulant effect at all. Brandy and whisky, when of good quality and well diluted (at least one in four or five parts of water or milk), hold the first rank.

II.—CARDIAC TONICS, AND CARDIO-VASCULAR DIURETICS

The relative value of the members of this great group of remedies, which includes digitalis, strophanthus, squill, and convallaria, casca, adonidin, senega, scoparium, and other drugs of less importance, continues to be carefully tested. An addition may be said to have been made during the year to this group, by the revival of the use of chloride of barium in diseases of the circulation. It may be safely asserted that digitalis maintains its position unshaken at the head of the list. Strophanthus has received as much attention as ever, if we may judge by the extent of its literature. It unquestionably succeeds in certain cases when digitalis has failed; but what constitutes this fitness has not been accurately determined. The same is to be said of the several other members of this group. The urgency of most cases of cardiac dropsy necessarily interferes with tentative or experimental therapeutics. The present clinical rule in cases of failing heart may be said to be-to administer digitalis; and, if it fails or disagrees, to try one or other of its allies or succedanca.

3. Cardine tonics.

In the therapeutical section of the International Medical Congress held at Paris, M. Bucquoy (The Medical Press, August 14, 1889), in introducing the subject of cardiac tonics, said that the therapeutics of diseases of the heart is directed not so much to combat the lesions of the organ as to raise its tone when this is deficient. Digitalis for many years was regarded as the agent par excellence prescribed with that intent, and even at present its wonderful effects in certain cases justify this opinion. During the last few years other agents have been introduced, such as convallaria, adonis vernalis, strophanthus, squill, etc., the greater number of which act in strengthening the ventricular systole, in regulating the pulse, and in producing a more or less abundant diuresis. It would be interesting to know how long the administration of each of these medicines could be pursued. Caffeine and strophanthus can be continued for a long time, whilst digitalis accumulates rapidly. M. Bucquoy has tried strophanthus.

on 200 patients. He found that in mitral disease the pulse becomes strong and regular; and that when the aortic valves are the seat of the lesion, Corrigan's pulse becomes greatly exaggerated. He considers the drug a precious agent, which can be prescribed indefinitely. Its diuretic action is constant—fatty degeneration is the only contra-indication to its administration. He believes strophanthus to be more efficacious than its active principle strophanthin.

4. Relative value of the cardiac tonics.

The results of a long discussion at the Académie de Médécine of Paris (Jour. of Amer. Med. Assoc., Feb. 23, 1889) on the therapeutic value of strophanthus, digitalis, and other cardiac remedies, appear to be, as regards strophanthus, that its effects are analogous to those of digitalis. Professor Germain Sée prefers to the preparations made from the entire plants the active elements of those plants, such as the alkaloids, the glucosides and the salts, which are of a definite form, and will always, in the same dose, produce identical effects. He therefore prefers strophanthin to strophanthus, and digitalin to digitalis. As regards their action on the heart, he contends that strophanthus determines only a feeble diuresis, and that it acts but little on the dyspnæa attending affections of the heart. There are three or four other cardiac medicaments, each of which responds to a particular indication. If the physician wishes to act directly on the heart, he may choose between digitalis, the salts of potash, sparteine and strophanthus, but digitalis should be preferred, as it is the most diuretic. Where oppression is the prominent symptom, with a loss of equilibrium in the circulation, M. Sée prefers iodide of potassium. When dropsy is present he adds digitalis to the iodide, or caffeine.

Dr Laborde, chef of the Laboratory of the Faculty of Medicine, after a series of experiments conducted by him, demonstrated the superiority of the active elements, glucosides or alkaloids, over the entire plants. The former, in medicine, he says, represent progress, the latter represent routine. He studied various pharmaceutical preparations, and found enormous differences in the proportion of the active substance contained in tinctures and extracts. He therefore agrees with Professor Sée that strophanthin should be preferred to strophanthus, and

digitalin to digitalis.

Drs. Dujardin-Beaumetz and Huchard differ from Professor Sée as concerns digitalis, which they prescribe in the form of in-

Dr. Pope (The Lancet, April 13, 1889) read some notes before

the Leicester Medical Society on sixteen cases in which he had prescribed strophanthus. He remarked on the similarity of its effects to those of digitalis, pointing out that it differs principally in the rapidity of its action. The usual dose he prescribes is five minims. It produced vomiting in five of the cases, and this fact alone he considers shows its inferiority to digitalis. On the other hand, it acted well in four cases after digitalis had been given with little or no effect. Altogether, strophanthus either failed, or had to be discontinued owing to vomiting, in half the cases referred to. He considers that strophanthus should be principally used where digitalis has failed, or where a specially rapid action is required.

M. Huchard (Philadelphia Medical Times, Feb. 15, 1889), speaking of new drugs, says that for some time back he has looked upon the latest inventions with distrust. We have the old ones, which have been proved and tried for years; and still we have not settled their real physiological action or their therapeutical indications. All authors proclaim digitalis to be the best of cardiac medicines, yet new drugs are constantly being brought out to replace digitalis. Of strophanthus M. Huchard says that it may be an excellent remedy, but one still com-

paratively untried and not fixed in its indications.

5. Digitalis in heart disease in children.

In an interesting and elaborate paper (Archives of Ped., Feb., 1889) Huchard asserts that in principle it should be admitted that children tolerate digitalis well, on account of the integrity of the cardiac muscle, the blood-vessels, and the secretory or eliminative organs, such as the liver and kidneys. Old people tolerate the drug badly, on account of lesions in the cardiac muscle and the blood-vessels, and a state of impermeability in the kidneys, or insufficiency in the liver. In old people, therefore, especially in those who are known to suffer from arterial sclerosis, digitalis should be given with caution and in small doses. To children, on the other hand, digitalis should be given for very short periods and with great caution, for heart disease in them is known to exist for a long time in a latent condition in which the physical signs are not pronounced. Even in cases in which digitalis seems to be well tolerated by children, it is wise to follow the rule that in young subjects toxic medicines should be given in very minute doses, their physiological effects should be carefully watched, and their use should be suspended at the earliest possible moment. Digitalin should not be given to children, especially in its crystalline form. The infusion of digitalis may be given in doses of five to ten centigrammes of the leaves to one hundred and fifty

grammes of water. The extract of digitalis may be given in doses of one to two centigrammes to children under two or three years of age, in doses of five centigrammes to those of five years, and in doses of ten centigrammes to those who are more than five years of age. Of the French alcoholic tincture five to ten drops may be given to those under three years of age, and ten to fifteen drops to those from three to five years of age; twenty drops to those who are more than five years of age.

Dr. Hare (University Med. Magazine, March, 1889) has found that strophanthus acts exceedingly well in children in the

instances where digitalis fails.

6. Sparteine. Professor Levascheff (Therapeutical Gazette, Sept., 1888) has completed an experimental study on the action of sparteine. He concludes that sulphate of sparteine has incontestably the property of reinforcing and regulating the contractions of a feeble or arhythmic heart, while at the same time slowing the pulse if that should be accelerated. Sparteine increases the blood pressure, and causes the disappearance of symptoms of blood stasis and adema, thus acting favourably on diuresis. For all this, sparteine is less active than the other cardiac tonics—digitalis, adonis, and strophanthus. In inveterate cases, where the heart-muscle shows symptoms of degeneration, or where edema is very excessive, sparteine is without effect, even although the other cardiac remedies may act in a more or less favourable manner. Sparteine is indicated in recent cardiac affections, when compensation is but little disturbed, and when the degeneration of the cardiac muscle is inconsiderable. It acts very rapidly. fifteen minutes being sufficient to produce its characteristic action. and therefore has a certain value in cases of acute enfeeblement of the action of the heart, as observed in acute infectious diseases. The daily dose of sulphate of sparteine should be from threefourths of a grain to five grains, taken in three or four doses. The inconveniences of sparteine are diarrhoa, vomiting, and nausea.

7. Barium chloride in heart disease.

Dr. Hare (The Medical News, Philadelphia, February 16, 1889) details the results which he has reached in the employment of barium chloride in cardiac disease. He reminds us, by way of introduction, that Drs. Lauder Brunton, Ringer, Kobert, and Bary agree in the statement that barium slows the heart very greatly, steadies its rhythm, and at the same time increases the volume of blood thrown out of the ventricle. They have also found that barium increases blood-pressure, and Kobert concludes that

it brings about this change by an action on the muscular coats of the blood-vessels. If large doses are used in the lower animals, the heart suffers systolic arrest from over-stimulation, and the strongest irritation of the vagus nerves fails to relax the systolic contraction. This failure of the vagi to inhibit the heart is not the result of paralysis of these nerves, but is simply due to the excess of cardiac contractile power. The slowing of the pulse depends solely upon the stimulation of the heart-muscle; although, probably, the vaso-motor stimulation, by increasing the arterial resistance, may also be a factor.

Dr. Hare orders barium chloride in doses of a teaspoonful of a 1 per cent. solution. In most works on chemistry, barium is stated to be an irritant poison, but to produce such evidences of its presence the dose must be extremely large-many times greater than any amount useful for practical medicinal purposes. In barium, therefore, we seem to possess a remarkably cheap, virtually tasteless, and very slightly poisonous drug, which, nevertheless, acts as rapidly as digitalis, and does not disorder the

stomach.

8. Nux vomica in cardiac failure.

Dr. A. Bowie (The Lancet, March 2, 1889, p. 423) draws attention to the value of nux vomica in cases of cardiac failure. He reports two cases where death seemed imminent, which were speedily relieved by small doses of the tincture of nux vomica, administered every half-hour for four doses, then every hour. He believes that in his two cases the drug stimulated the motor centres and the ganglionic system to increased activity, and rescued the patients from the consequences of obstructed pulmonary circulation and engorgement of the right heart.

9. Cactus grandiflorus in cardiac affections. Dr. Gregory (Rev. de Ther. Méd.-Chir., June 15, 1889) says that in cactus grandiflorus we possess a remedy the continued use of which gives tone and strength to the heart. He has used it with great success in functional valvular affections, and in such cases regards it as of greater value than digitalis. It specially strengthens weak, irregular, and tumultuous hearts where the patient is nervous and restless and dreads some impending danger. drug has no injurious effect upon the digestive system.

10. Milk diet in cardiac disease.

A critical paper on the value of absolute milk diet in heart disease has been published by H. Högerstedt (Med.-Chir, Rundschau, 1889, H. xvii., p. 652). Urged by the objection brought forward by F. A. Hoffmann in his discussions upon total milk diet, that there are no reliable recorded histories where the milkregimen has been worked out in a strictly scientific manner, the writer describes fully a case of pure mitral stenosis, from the Dorpat clinic, carefully followed out, in which Karell's total milk-regimen was repeatedly followed by excellent results. From the circumstance that pure mitral stenosis, where there is commencing failure of compensation, opposes the utmost difficulties to therapeutic treatment by the ordinary cardiac remedies, the author believes that he had a peculiarly favourable opportunity of judging of the influence of pure milk diet upon the action of The case observed was in an advanced degree of failure of compensation. Digitalis, tried after complete failure with calomel, was of no service; caffeine also had no effect; there was no tonic action upon the heart, and the state of the patient was extremely serious from the general venous congestion and On the contrary, the result with total milk diet. weakness. after six months' observation, twice repeated, was most striking. The highly favourable action on diuresis and pulse became evident as early as the fourth and fifth day after the commencement of exclusive milk diet; and at the same time there supervened a remarkable diminution of congestion, and a general improvement in the condition of the patient. From experiments made under different dietetic conditions, the author was able to draw up the following table:-

	Diuresis.	Albuminuria.	Pulse frequency.	Congestion.	General Condition.	
▲bsolutemilk diet.	Rapidly increases and remains great.	Rapidly di- minishes and disappears.	Becomes less until it reaches and falls below normal.	Diminishes and disappears,	Improves sur- prisingly.	
Milk diet principally.	Gradually falls	Steadily in- creases.	Very gradually increases.	Very slowly in- creases.	Gradually worsens.	
Full diet.	Very slight.	Remains con- stant.	Remains high.	Reaches a high degree.	Bad.	
					I	

It is important to insist upon gradual increase of the amount of milk taken, and to give it in small quantities (Weir-Mitchell). As regards the difficulties to be encountered in the carrying out of the milk regimen, the practitioner must not yield, but continue firm. Though according to Hoffmann's experiments under other conditions an absolute milk diet is undoubtedly hunger diet, yet in the case of the sick kept from working and needless loss of heat, as among children, it may become a growing diet. Indeed, we possess in total milk diet, in so far as pathological and

anatomical conditions do not prescribe limits to us, a remedy for failure of compensation in cardiac disease which can favourably influence the power of the heart and the blood formation, even when reliance upon every medicament must be altogether doubtful.

11. Lactose in cardiac dropsy. See page 103.

III.—VASO-DILATORS: CARDIAC SEDATIVES.

These names imperfectly express the actions of the remedies to which they are applied-the nitrites, nitro-glycerine, iodide of potassium, etc. The value of these drugs in relieving pain, dyspnæa, palpitation, and other less definable but equally distressing cardiac symptoms, is now incontestable, and the literature of the year mainly confirms our previous conclusions in this direction. A few papers may be referred to by way of illustration.

12. Therapeutic indications of permanently slow

M. Huchard (La Semaine Médicale, No. 14, 1889; and Jour. Amer. Med. Assoc., May 18, 1889) has repeatedly had occasion to observe and treat patients who presented the symptom known as a permanently slow pulse. He is convinced that this symptom originates, in a majority of cases, from a sclerosis of the arteries. The principal indication is the employment of vaso-dilators, because we have to do with symptoms of bulbar ischemia. Iodide of potassium or of sodium may be resorted to, but M. Huchard prefers nitro-glycerine, which, like nitrite of amyl, is a congestant of the nervous centres. Of this he administers once or twice a day three drops of the 1 in 100 alcoholic solution. He makes use also of hypodermic injections, for which he employs the following formula: Water = 10 grammes; alcoholic solution of trinitrine (1 in 100) = 40 drops. One gramme, or one Pravaz syringeful, contains four drops of trinitrine solution; one may therefore give injections of a quarter of a syringeful from two to four times a day. In the first period of arterial sclerosis of the heart, when the pressure in the arteries is too great, recourse must be had to vaso-dilators. When, on the other hand, the action of the heart becomes more feeble and the tension in the arteries diminishes, vaso-constrictors, and especially caffeine, should be used.

13. Nitro-glycerine in cardiac affections.
Dr. L. V. Holst (The Therapeutic Gazette, Dec., 1888, p. 856) has employed nitro-glycerine in a number of accidents associated with cardiac disease, such as dyspnœa, angina, and palpitation. In certain instances it proved efficacious; in others it had no effect. He regards nitro-glycerine as a remedy capable of markedly affecting the innervation of the heart; its effects being most obvious in cases of cardiac weakness and valvular disease. The best results with nitro-glycerine Dr. Holst obtained in cases of angina. He does not regard it as a diuretic, although he has found that it increases the flow of the urine in certain cases, obviously by inducing increased action and regularity of the heart.

14. Paraldehyde in cardiac distress.

Dr. Goodhart (Brit. Med. Jour., Jan. 19, 1889) does not consider paraldehyde a reliable hypnotic, but of unquestionable value in the restlessness and cardiac asthma so often seen in aortic disease, and in the labouring dilated heart of chronic Bright's disease. The first case in which he employed it for this purpose was that of a man who had long been subject to gout, and who had a granular kidney and a large dilated heart. His distress was extreme, and all the old-fashioned remedies had been exhausted as well as many new ones, including caffeine; and with a marked condition of Cheyne-Stokes's breathing he had all the aspect of speedy dissolution. As a last resource Dr. Goodhart gave him, with marked relief, half-drachm doses of paraldehyde to the end of the case, which occurred about a fortnight later.

IV.-NON-MEDICINAL CARDIAC THERAPEUTICS.

15. Philosophy as a cardiac remedy.

The Editor of the British Medical Journal (January 26, 1889), referring to the Gulstonian Lectures, delivered by Dr. W. J. Mickle, on "Insanity in Relation to Cardiac and Aortic Disease and Phthisis," points out that the author endeavours to rearrange on a more satisfactory basis the connection between the various cardiac lesions and their mental concomitants. He combats the old view that aortic valve disease is characteristically associated with excitement, in contrast with mitral disease, supposed to be frequently connected with melancholia. Dr. Sutton in his Medical Pathology insisted upon rhythm and "going easy" in heart mischief; and this appears to have been the advice which Sir Andrew Clark gave to Mr. Matthew Arnold many years before his death.

Dr. J. G. Kiernan (Western Medical Reporter, 1888), read a paper before the Chicago Medical Society on the "Mental Symptoms of Heart Disease as Illustrated in the Case of Matthew Arnold." He reminds us that an account of death from cardiac failure is very frequently preceded by the statement that the deceased was in unusually high spirits just previous to death, which occurred after unusual exertion. He cautions us that instead of feeling encouraged by the patient's buoyancy and good spirits, we should make an effort to restrain them. Much could be done by moral measures to restrain these emotional displays, and to control the heart's action by the proper use of certain cardiac tonics. About twenty-five years before his death, the great apostle of culture contracted heart disease, in consequence of a rheumatic attack affecting the aortic valve. Dr. Kiernan thinks that Matthew Arnold's long-continued health was due in a great measure to his having adopted a modified form of the Quietist philosophy; devoting himself to studies in literature which made little demand on the emotions, he reduced his malady within manageable bounds, but having of late years relaxed this restraint in some degree, his rhythm was proportionately disturbed. Hence the stress laid by the author of the paper and by Dr. Sutton on the importance of a complete command of the emotions as possibly the best thing for our merely animal life.

V.—PERICARDITIS.

In connection with the circulation (if to a less extent than with the other great physiological systems) we continue to witness the invasion by the surgeon of what has hitherto been regarded

as peculiarly the domain of the physician.

The circumstances and methods of paracentesis and incision of the pericardium have been carefully considered and discussed by competent authorities; and certain experimental observations by Dr. Hare, of Philadelphia, on the comparative harmlessness of injuries of the myocardium, appear to foreshadow possible surgical interference even with the heart itself.

16. The treatment of purulent pericarditis.
Dr. Dickinson (The Lancet, Dec. 1, 1888), at a meeting of the Clinical Society of London, related a case of purulent pericarditis, which was successfully treated by aspiration followed by incision and drainage, the latter facilitated by the patient being placed face downwards in bed. The point selected for aspiration and incision of the pericardium was the fifth right interspace close to the sternum. At the same meeting Mr. Parker, in recording a case of extensive pyo-pericarditis, directed attention to the care with which the operation throughout must be performed. observations on the dead body, Mr. Parker recommends the fourth left intercostal space, close to the sternum, as the best place for making an opening. He contends that such an opening would

longest afford a direct communication with a gradually retracting pericardium—an important point in facilitating complete drainage. The same line of treatment should be followed for pericardial effusions as has been so successfully applied to pleural effusions; the greatest emphasis to be laid in this effort on the essential importance of aseptic conditions.

17. Paracentesis pericardii.

In the course of an article upon pericarditis in L'Union Médicale, M. Paul Cheron (Lancet, March 23, 1889) cites Fevrier's conclusions respecting the indications for surgical interference. and the best method of puncturing the pericardial sac. Such interference is called for when the effusion threatens to arrest the action of the heart by its quantity; in such a case the presence of a concomitant pleural effusion must not be overlooked. and, if existing, it should be dealt with first. A second ground for intervention is when the effusion is of long standing, and consequently liable to induce change in the cardiac muscles. A third indication is the fact of the effusion being purulent. Fevrier does not refrain from recommending tapping in tubercular pericarditis. in spite of the fact that out of twenty-two cases of this kind of pericarditis so treated twenty patients died at various intervals (from eight hours to eleven months) after the operation. good results have been obtained in hæmorrhagic cases, five out of nine having recovered after tapping. In serous effusions simple puncture suffices, but in purulent cases the pericardium must be Out of fifteen cases of purulent pericarditis treated by incision, eleven have died. He warns against delaying the operation too long, and attributes to that circumstance an instance where sudden death followed washing out of the sac, the heart being probably degenerate.

The site selected for puncture by the aspirator should be the fourth or fifth interspace to the left of the sternum. For free incision it is recommended to select the fifth interspace, and to incise the tissues layer by layer for a distance of three or four centimetres, taking care to avoid the internal mammary artery, which may need to be drawn inward; then the exposed pericardium may be carefully incised with a guarded bistoury, a portion of the membrane being drawn forward by forceps. Great care

should be exercised in irrigation, if this be employed.

Dr. Hugh Taylor (Brit. Med. Jour, Nov. 17, 1888) reports an interesting case in which paracentesis of the pericardium was performed. A fairly nourished anamic-looking girl of twenty-one was suffering from a very severe attack of rheumatic fever. She was found sitting up in bed with very rapid respiration,

quick, irregular pulse, and high temperature. Physical examination revealed the signs of endocarditis or pericarditis. On consulting with his partner, Mr. C. P. Hooker, Dr. Taylor decided to perform paracentesis pericardii. This Dr. Taylor did with an ordinary exploring trocar, passing the instrument a little to the left of what seemed the heart's apex. About one ounce of yellowish-red fluid was withdrawn. The patient bore the operation well. The symptoms were at once relieved, the respirations rapidly falling from 65-70 to 35-40 per minute. The patient made a good recovery.

18. Rational treatment of pericardial adhesions. Dr. Cantlie, of Hong-Kong (Brit. Med. Journ., April 13, 1889), comments on a case of adherent pericardium in a man of twenty-eight, who, as a boy of fifteen, suffered from rheumatic fever and pericarditis, and who afterwards disobeyed, in the most reckless manner, the advice given him. Prolonged rest, he says, will allow of the formation of fibrous adhesions in the pericardial sac, rendering it impossible for the heart to execute more than a limited amount of movement; whereas early cardiac excitation will bring more movement to bear on the recentlyformed adhesion tissue, and pull it out into strands of tissue, in place of allowing it to heal as it chooses in patches. In fact, a filamentous, in place of a membranous, adhesion will be more likely to be induced, thereby allowing more freedom of cardiac movement. When valvular disease is present in conjunction with pericardial adhesions, encouragement to take exercise will, no doubt, cause trouble; but with pericardial adhesions pure and simple, it seems only rational that benefit may ensue from gradually-increased exertion at a reasonably early period during convalescence.

VI.—GRAVES'S DISEASE.

 Treatment of Graves's disease.
 Professor Eulenberg (Berlin. klin. Wochen., Nos. 2 and 3, 1889) considers that the best treatment for Graves's disease is to place the patient in a sanatorium for nervous affections. When the sanatorium is situated in high altitudes the most brilliant results may be obtained. Contrary to the general belief, the worst complications of exophthalmic goitre with organic heart-disease (valvular mischief and loss of compensation) do not present an absolute contra-indication to a sojourn in high altitudes. (See "Year Book of Treatment" for 1889, p. 17.) In cases where rapid cardiac action and respiratory distress ensue, lower altitudes and sub-alpine climates will be found preferable. Concurrent with the climatic treatment, Professor Eulenberg recommends the use of the milder forms of cold water treatment and carbonic acid baths, and likewise lukewarm carbonic acid and brine baths at short intervals. He lays especial stress on the employment of hydro electric baths—preferring monopolar cathode baths, com-

bining with these a local application of electricity.

Dr. Dale (Medical News, Philadelphia, vol. liii., 1888) has successfully treated a case of exophthalmic goitre with strophanthus. The patient, a married woman of thirty-five, the mother of six children, had been ill for several months. The heart was tumultuous and irregular, and the pulse did not fall below 120. Tincture of strophanthus was prescribed in doses of five drops three times daily. After two weeks the heart became regular in rhythm, though not in force, the pulsations were reduced to 80, and the murmur in the goitre lessened. At this stage Dr. Dale gave a mixture containing six drops of tinct. ferri chloridi and two drops of liquor arsenici chloridi three times daily, but in three days such general and extensive anasarca had developed that it was omitted. Under the continued use of the strophanthus and of tonics, with the faradic current applied to the goitre, there was a decided amelioration of all the symptoms: the action of the heart became steadier, the goitre lessened in size, the appetite improved, and the strength increased. Unfortunately. the patient declined to submit to further treatment.

Dr. Daniel B. Brower (Journ. Amer. Med. Assoc., vol. xi., No. 18, 1888), reminds us that the treatment of exophthalmic goitre is very unsatisfactory. The drugs in ordinary use have but little influence upon it; but he thinks we have in strophanthus a remedy of great value in some cases. He has administered it in three cases with benefit.

In one case a man of 21, who had been under the ordinary treatment for three months with a steady progression of the disease, was cured in four weeks. Tincture of strophanthus was commenced in two-drop doses every six hours, and gradually increased until ten drops were given. The pulse, which at first was so rapid that he could not count it, was finally controlled, falling when quiet to 85 per minute. The exophthalmos and goître also gradually disappeared. The strophanthus was slowly withdrawn and tonics substituted. The patient continues well. Dr. Brower does not advise reliance solely upon strophanthus. Ordinary hygienic rules must be observed. He also employs tonics, and the application of galvanic electricity to the cervical sympathetic nerves.

Dr. W. E. Magruder (Medical News, vol. liii., No. 18, 1888)

publishes a case of exophthalmic goitre, in which success attended treatment with sulphuric acid. The patient, a lady about twenty two years, presented the usual symptoms. Dr. Magruder treated the case for more than two months with very little improvement by the various remedies, such as digitalis, iron, quinine, aconite, strychnine, ergot, belladonna, alone and in various combinations, and also by means of electricity, galvanic and faradic. He then gave aromatic sulphuric acid in combination with digitalis and ergot, and found a decided improvement in a very short time. This combination, however, soon disagreed with the stomach, and he therefore gave the acid alone (twenty drops every four hours). The improvement continued. The pulse became less frequent, the pulsation soon ceased in the thyroid gland, and the enlargement gradually decreased, as did also the protrusion of the eyeballs. For about one year there was a tendency to a recurrence of the disease, but it always yielded promptly to the acid, and so marked was the relief afforded that the patient resorted to its use whenever she felt a return of the symptoms. She is now perfectly well.

Dr. Hermann Mueller (Brit. Med. Journ., June 22, 1889), at a meeting of the Gesellschaft der Aerzte in Zürich, reported the case of a girl, aged ten and a half, who was cured of what may almost be called acute exophthalmic goitre. About a fortnight before the girl came under notice, there had suddenly appeared, without any visible cause, extreme awkwardness in the movements of her hands, so that she had become unable to write or perform any manual work. Shortly afterwards, frequent vomiting, general lassitude, vague pains all over the body, exophthalmos, and, ultimately, marked swelling of the thyroid gland had supervened. There was also increased action of the heart, with moderate enlargement of the area of cardiac dulness, systolic bruit, and tachycardia; and a loud systolic murmur was heard over the goître. The treatment consisted in local inunctions of iodine ointment, with steel and arsenic internally. In about six weeks every trace of the disease had disappeared, and

the cure was apparently permanent.

VII.-NEW BOOKS.

1. Vorlesungen über den Krankheiten des Herzens. (Lectures on the Diseases of the Heart.) Von Dr. Oncar Fraentzel. I. Die Idiopathischen Herzvergrösserungen. Berlin, 1889.—This, which is the first part of Professor Fraentzel's "Lectures on the Diseases of the Heart," is occupied with the so-called idiopathic diseases of the organ, i.e. those independent of valvular lesions. The work is in every respect worthy of careful perusal, especially by the officers of our Army Medical Service, written as it is by a distinguished Prussian military surgeon of great experience. In this place we can notice only the sections devoted to treatment.

Failure of the Heart in Bright's disease.—Fraentzel recommends: (1) alcohol, valerian, camphor, and musk, to stimulate the heart; (2) large flying blisters on the chest, purgatives, morphine (unless contra-indicated), and acetate of lead—to check exudation into the bronchi and lungs. The acetate of lead is

exhibited in doses of pths grain every one or two hours.

Arterial Degeneration (sclerosis), according to Fraentzel's view, is associated with cardiac enlargement not as its cause, but as the common result of free eating and drinking, or of excessive muscular exertion. Much can be done for these cases, even when dropsy has made its appearance. The principal part of the treatment is dietetic. The well-to-do subjects of this disease (in Germany) are frequently "men who have risen," who eat largely and drink beer. Here the question arises as to the value of Oertel's system ("Year-Book of Treatment," 1884). Fraentzel does not recommend measured distances and daily climbing, but sends his patients to the Alps, where they are unwittingly attracted to make ascents by the scenery and companionship. Riding and swimming are to be recommended with caution; Swedish gymnastics and massage are beneficial. Therewith, the diet is to be simplified; the alcohol reduced [why not removed entirely ?]. Above all, a proper relation must be secured between diet and exercise. Purgation is excellent in its effects. Carbonated warm waters are to be avoided; cold Carlsbad water is best for these cases. When the heart fails, we ought not to be afraid to relieve distress by morphine subcutaneously, but must shun chloral; and with the morphine are combined digitalis and purgatives. The dose of morphine may be raised to th grain (from 1 th grain), an insufficient dose possibly producing excitement; and even Cheyne-Stokes's breathing is not a contra indication—indeed, it disappears in the morphine sleep. Fraentzel acknowledges and attempts to justify the establishment of morphinism in these cases. Unfortunately he does not state the indications which are to guide us in commencing this "losing battle." As for digitalis, he prefers the infusion, and combines it occasionally with quinine. Tincture of strophanthus he has found "always useless" in this class of disease.

Graves's Disease he considers to be very easily treated in most cases. He follows closely Traube's method, giving quinine gr. 1 to 1½, and iron—gr. 3 of Pil. Valleti (Ferri Sulph. et Sodii Carbon.) for alternate periods of fourteen days, for months, whilst excitement and exertion are forbidden, and moderate exercise and digestible food with a little alcohol are ordered. He has not found it necessary to prescribe electricity, and considers digitalis worse than useless.

2. Klinik der Kinderkrankheiten (Clinic of Diseases of Children), Von Dr. A. Steffen, Oberarzt des Kinderspitals zu Stettin. Dritter Band. Krankheiten des Herzens (Diseases of the Heart). Mit 52 Holzschnitten. Berlin: 1889.—Of the 427 pages of this work, only 16½ are devoted to treatment, and about one-third of these are occupied with an account of the surgical treatment of pericarditis. It will be gathered from this analysis that Dr. Steffen's remarks on the medicinal, dietetic, and hygienic treatment of heart disease in children are of a somewhat general character.

In Acute Pericarditis in children he would not leech, but employ cold applications—including the ice-bag—to the pericardium, combining with this method the internal administration of digitalis and quinine, or other antipyretics. Of these, very curiously, he prefers thallin or antifebrin, as not being in his opinion cardiac depressants. To promote absorption he recommends blistering and the use of diuretics, diaphoretics, and purgatives, but insists on attention, before everything else, to the preservation of the bodily strength. His account of the operative treatment of large and of purulent pericardial collections is entirely derived from the experience of others.

Tubercular Pericarditis he would treat on precisely the same

lines, even to free incision of the sac in urgent cases.

In Serous Effusions into the pericardium, as well as in large inflammatory collections, and also in acute endocarditis, and in dilatation when cardiac failure has made its appearance, Dr. Steffen evinces a strong partiality to the employment of warm or even hot baths as a means of diaphoresis. He orders the child a daily bath until the effusion has disappeared, beginning with a temperature of 95° Fahr., and raising the same to 106° or 108° Fahr. by the addition of hot water, according as it is borne. The patient is then wrapped in warm sheets and woollen coverings; and to encourage the sweating, which is kept up for three hours, hot milk and other drinks are given. If unfavourable symptoms arise in the hot bath, cold effusion must be energetically practised in combination with alcoholic stimulation.

In Acute Endocarditis debilitating means are to be avoided, including the newer antipyretics. Digitalis, strophanthus, quinting, and ergot are the most valuable cardiac stimulants, to be followed by iron. Medicinal treatment otherwise is mainly symptomatic. The comparatively little reference made to the salicylates is doubtless to be accounted for by the fact that Dr. Steffen could discover a rheumatic origin in but one out of every eight of his cases of acute endocarditin in children.

The treatment of ulcerative endocarditis is, in Dr. Steffen's opinion, practically hopeless, and is to be confined to strengthening the heart, antipyretics internally being contra-indicated by

the great cardiac debility.

Dilatation is to be treated by attending to its cause, and sustaining the cardiac force by means of a carefully arranged diet; digitalis and its allies, alcohol (including beer, which Dr. Steffen repeatedly recommends for children with cardiac failure), stimulants, and iron.

Acute Dilutation is to be managed on the same principles but more energetically.

Hypertrophy calls for no treatment beyond conservative attention.

3. A Text Book of General Therapeutics. By W Hale White, M.D., F.R.C.P. With illustrations. London: Macmillan and Co., 1889.—We extract from Dr. Hale White's new work on general therapeutics a few paragraphs relating to the heart.

Phthisical patients with disease of the heart must not go to a high altitude, because of its effect upon the pulse and upon respiration. Altitudes much over 1,000 feet are harmful. The climate ought to be one which allows the patient to take moderate exercise. No risk should be run of producing bronchitis. As a

rule, inland climates are preferable to littoral.

Venesection.—The withdrawal of blood from the veins is of the greatest value in cases in which, either from disease of the heart itself, or from disease of the lungs, or from impairment of the respiratory movements, blood stagnates on the right side of the heart. The bleeding must not, of course, be carried to a dangerous extent, nor must it be repeated time after time as was formerly the custom. Often a single venesection will suffice to act like a charm, giving the whole circulatory apparatus a fresh start, and then other treatment can be adopted. The guide for determining whether or not to bleed is the state of the venous system. If the veins are gorged and the patient livid, then the removal of from ten to tifteen ounces, or even more, of venous blood will be of greater use than any drugs. So far from a small pulse being taken as a reason for withholding bleeding, it is an indication for it, because in these cases it shows that not much

blood is passing through the lungs, and that the arterial system is, comparatively speaking, empty. Many of us must have seen cases recover after bleeding, and react to digitalis, when before venesection the drug was powerless. Sufferers from an intrathoracic aneurysm, in whom pain, general distress or lividity, is a prominent symptom, may often be relieved for a time by bleeding. Dr. Hale White has seen a man whose last days would have been a prolonged agony invariably relieved whenever he was bled.

DISEASES OF THE LUNGS AND ORGANS OF RESPIRATION.

BY E. MARKHAM SKERRITT, M.D. LOND., F.R.C.P.,

Senior Physician to the Bristol General Hospital, and Lecturer on Medicine in the Bristol Medical School.

1. The pathology and treatment of bronchial asthma.

Dr. J. B. Berkart (Churchill, 1889) holds that asthma is essentially inflammatory, producing changes in the epithelial lining of the bronchi which result in the formation of serofibrinous or fibrinous exudation, as proved by the casts expectorated; and that the paroxysmal dyspnæa is due to the displacement of plugs so formed, and their lodgment in other parts This "embolism" causes mechanical of the bronchial tract. obstruction to expiration, and may also set up true bronchial spasm. The paroxysm gives way owing to the free secretion of thin fluid and the dilatation of the bronchi, which allow of the escape of the impacted plugs. He suggests that a streptococcus which he has always found in the sputa may be the cause of the disease. Morphia injected hypodermically is the most potent remedy for this "bronchial tenesmus;" and other drugs, if they act at all, do so through their expectorant or stimulant properties. Jaborandi or pilocarpine is very useful in loosening the exudation when firmly impacted.

2. Antipyrin in asthma.

Dr. J. L. Dodge (Dublin Journ. of Med. Science, Dec., 1888) records the case of a patient who for three years had been subject to severe asthma, which had resisted other remedies. Fifteen grains of antipyrin were given the first night at 6 p.m. and again at 12, with benefit; the dose was gradually lessened to 5 grains three times a day, and the patient was well in a week.

Dr. Bruen (Practitioner, April, 1889) has found that in some cases antipyrin reduces the severity and the number of the

paroxysms of asthma. To an adult he gives 5 grains, repeated

until 25 grains have been taken.

Dr. J. L. Dueñas (Lond. Med. Rec., March 20, 1889) states that this drug has at first an extraordinary effect in asthma, but soon loses its power; and that it does not influence the ulterior course of the disease.

3. Cocaine in asthma.

Dr. Dunn (Lond. Med. Rec., Oct. 20, 1888) states that the hypodermic injection of from $\frac{1}{4}$ to $\frac{1}{2}$ gr. of cocaine, with from $\frac{1}{12}$ to $\frac{1}{8}$ gr. of morphia, gives almost instantaneous relief in the paroxysm.

 Linseed oil as an expectorant.
 Dr. W. H. Thompson (New York Med. Journ., Feb. 9, 1889) has obtained good results from the following mixture in bronchial asthma, congestive bronchitis, the bronchitis of heart disease, and senile bronchitis :- Linseed oil, 3xv; oil of wintergreen, and oil of cinnamon, each 3ij; glycerine, 3v; simple syrup, 3x; water, 3xxiv.

Dr Darlington (ib.) has given pure linseed oil with advantage

in bronchial cough.

5. Antipyrin in spasmodic cough.

Dr. Bruen (Practitioner, April, 1889) states that this drug allays spasmodic cough in influenza with bronchial catarrh, and in some cases of subacute bronchitis. In these cases enlargement of the bronchial glands almost always exists, causing irritation of the pneumogastrics, and exciting cough through their pulmonary and laryngeal branches. The dose for an adult is 2 grs. every three or four hours.

6. The danger of paraldehyde in emphysema.

Dr. H. D. Rolleston (Practitioner, Nov., 1888) relates the case of a patient with advanced emphysema, bronchitis, dilated right heart, and slight cyanosis, in whom a dose of 3j of paraldehyde caused rather sudden dyspnæa and collapse. The drug kills by paralysing the respiratory centre, and hence its danger when venosity of the blood already exists.

 Terebene in affections of the respiratory organs.
 Dr. D. M. Cammann (New York Med. Journ., Nov. 10, 1888) has used this remedy in acute bronchitis, asthma with bronchitis, emphysema, phthisis, pleurisy, and pleuro-pneumonia, in doses of from 15 to 30 drops in mucilage. Cough was relieved, expectoration lessened and made less viscid, dyspnea diminished, appetite improved, and the amount of urine increased. The only occasional unpleasant effects were vomiting, nausea, and dizziness. (See also "Year-Book" for 1889, p. 23, § 5.)

n. Inhalations of exygen in diseases of the respiratory organs.

Dr. W. G. Thompson (New York Med. Rec., July 6, 1889) recommends this method of treatment in the following conditions:

-In neurotic dyspnaea; where the blood-aërating surface is diminished; where there is lessened inflation of the lungs from any cause; and specially in the dyspnaea of chronic Bright's disease and uramia, in pneumonia, capillary bronchitis, asthma, catarrhal bronchitis, sometimes pulmonary congestion, and in the early stage of ordema of the lung.

9. The treatment of lobar pneumonia.

(Abstract of a discussion in the New York Academy of Medicine, New York Med. Rec., Jan. 12, 1889.)

Dr. T. E. Satterthwaite considered from post-mortem evidence that antipyreties not only weakened the heart, but also affected the kidneys unfavourably. In sthenic cases repeated cupping was often useful; in less vigorous patients cold water applications frequently did good. If liver action was defective, large doses of mercurials should be given. Where renal complications existed, the lung symptoms were much relieved by measures directed to the kidneys.

Dr. A. H. Smith would do too little rather than too much. He agreed that depressing antipyretics were to be avoided, and yet the reduction of temperature was often important. Where the skin was already active, recourse might be had to diuresis and catharsis. Inhalations of oxygen would sometimes carry the patient over the danger, especially when there was much fluid in the uninflamed lung.

Dr. Beverley Robinson strongly disapproved of antipyretics, which weakened the heart and depressed the system. Sometimes infusion of digitalis would reduce the temperature much more than antipyretics, aconite, or veratrum. He advocated the use of oxygen gas, of black coffee as a stimulant, of brandy, and small doses of calomel. He objected to the cotton-wool jacket and to poultices, as favouring the chilling of the patient.

Dr. Simon Baruch had come to adopt expectant treatment. He held that antipyreties were contra-indicated in pneumonia, as they tended to cause heart failure; while the temperature itself was not the real cause of danger. Unless the patient was very weak, the heart should be relieved by acting on the portal system by means of eight or ten grs. of calomel, followed by saline cathartics. He was in favour of the cotton-wool jacket.

10. Large doses of digitalis in pneumonia.

Professor Petresco (Therap, Gazette) says that croupous

pneumonia is very common in the Roumanian army, and that in the last five years he has treated over 600 cases. He gives 3j to 3iij of digitalis leaves (in infusion) daily. The disease is cut short in three days, the fever and the physical signs disappearing as if by magic. A temperature of 105.8° is reduced to 95°, and a pulse of 120 or 130 to 36, 30, or 28. The patient rapidly recovers, while the saving in tissue-waste shortens convalescence. He has used this method since 1883, and the mortality has been 1.22 per cent. The more severe the disease, the larger the dose. Digitalis poisoning does not occur. In infectious and typhoid pneumonias, convallaria majalis and caffeine may be added with advantage.

11. Heroic doses of calomel in pneumonia.

Dr. Strong (New York Med. Rec., March 16, 1889) has given large doses of calomel in twenty cases of croupous pneumonia, of all grades of severity, and in patients of from eight to sixty years of age. The usual and smallest dose for an adult is twenty grs. every three hours, generally for twenty-four hours; but in one case which threatened to be fatal, a woman took an initial dose of sixty grs., and thirty grs. every three hours afterwards, making a total of 360 grs. In all there followed immediate improvement in the temperature and respiration, and specially the heart's action, subsidence of the fever in twenty-four hours, and rapid recovery (except in one case, where the patient was apparently recovering, when fatal purpura hamorrhagica set in). No ptyalism is produced, and but moderate catharsis.

12. Chloroform inhalations in pneumonia.
Clemens (Therap. Monatsh., 1889, 177) forty years ago reported forty-two cases of pneumonia treated with inhalations of chloroform, with only two deaths. Since then he has treated all in the same way without a single death. The chloroform is mixed with rectified spirit to prevent its decomposition, and to avoid narcotising the patient. A firmly-twisted piece of cotton is saturated with the mixture, wrapped in loose dry cotton, and held near the mouth and nose in such a way that air is always breathed with the vapour. The more grave the case, the longer and more frequent are the inhalations, and the greater should be the proportion of alcohol to chloroform.

The chloroform defibrinates the blood, and interferes with the local inflammation; hence hepatisation seldom occurs, and the disease runs a short course; and there is often a very rapid dis-

appearance of all physical signs.

13. Wet cupping in pneumonia. Dr. Van Bibber (Lond. Med. Rec., Oct. 20, 1888) lays special stress on the relief to mechanical congestion and strain on the right heart given by wet (or dry) cupping over the root of the lungs every third day.

14. The local application of ice in pneumonia.

Dr. Fleandt (Lancet, 1889, ii. 279) advocates the application of an india-rubber ice-bag over the affected lung, the usual remedies being also given. Out of 106 cases thus treated, 10 of which were double, there were only three deaths.

15. The contagiousness of pneumonia.

Netter (Archiv. Gén. de Méd., 1888, ii. 58) holds that pneumonia is a contagious disease, owing to the presence of the pneumococcus, which is specially abundant in the sputa. Contagion is possible long after the recovery of the patient, as the active germ may persist in the mouth. The isolation of the pneumonic patient is not necessary, but the linen, etc., should be treated as in other infectious diseases, and the sputa should be destroyed. Disinfection of the mouth would lessen the danger of relapse and the risk of infection of others. The patient should be carefully separated from cases of typhoid fever, measles, nephritis, diabetes, and acute inflammation of the respiratory tract, lest he should convey the infection to them.

16. Aseptic climates without altitude. Dr. W. H. Geddings (New York Med. Rec., Dec. 22, 1888) considers that dryness and purity of the air are the most important factors, dryness being held to be of more consequence than elevation. Aiken, S.C., U.S.A., has an elevation of only a few hundred feet, but has a very excellent effect in phthisis (see New York Med. Rec. of Nov. 15, 1879; Oct. 30 and Nov. 6, 1880; Oct. 3 and 10, 1885), the tabulated results in 69 cases being as follows: -- Cured, 13; improved, 29; unchanged, 7; deteriorated, The special features of Aiken are very pure dry air. moderate temperature (the winter and spring mean is 58° Fahr.), extreme dryness of soil (sand with very little clay, and complete absence of water to a depth of 100 feet), and the large predominance of bright clear weather.

17. Falkenstein in phthisis

Dr. Dettweiler (Gaz. des Hôpit., Nov. 8, 1888), the head of the sanatorium of Falkenstein, says that the essence of the treatment there adopted is constant exposure to a pure exhibarating atmosphere, with a liberal diet and suitable exercise. Of 1,022 cases of phthisis so treated, 13:2 per cent. recovered, and 11 per cent. much improved.

18. Alpine winter climates and renal complications in phthisis.

Sir Andrew Clark (Lancet, 1889, i. 8) states that in his

experience the cold tends to aggravate the renal disease, which reacts injuriously upon the general health; and concludes-(1) that patients sent to Alpine winter resorts suffering from albuminuria seldom do well, and (2) that patients who become albuminuric while dwelling there almost always do badly.

19. Teneriffe as a health resort.
Dr. J. K. Barton (Dubl. Journ. of Med. Sci., May, 1889) says that the time for Orotava is from December to May; later the climate is too hot and relaxing, and invalids should go to Laguna on the central ridge. The rainfall is slight, and the air is much drier than in Madeira, the special features of the climate being equability, dryness, and warmth, with a refreshing breeze. It is best suited to bronchitis, emphysema, and all inflammatory diseases of the lungs which need a mild winter; its effect in phthisis is not yet sufficiently known.

20. The influence of climate on the bacillus tuberculosis.

Dr. G. Hunter Mackenzie (Edinb. Med. Journ., Jan., 1889) has never seen complete disappearance of bacilli from the sputum as the effect of any climate.

21. Hydrofluoric acid inhalations in phthisis.

Dr. E. Goetz (Rev. Méd. de la Suisse Rom., No. 8, 1888) tried this treatment only in favourable cases. The patients were placed for an hour daily in an atmosphere saturated with the acid. Good food, cod-liver oil, and quinine wine were also given. In 19 out of 30 cases marked and permanent improvement took place; in 3, no definite change; 3 deteriorated; and 5 died during the treatment. Improvement took place only in cases of the first and second stages; weight and appetite increased, nightsweats disappeared after from five to ten sittings, fever sometimes continued after the other symptoms were improved. Diarrhea, laryngitis, and cough were not influenced, except that cough was sometimes slightly increased. In only two cases was there marked improvement in physical signs, and in all the bacilli persisted.

Dr. Ludwig Polyak (Buda-Pesth Med. Soc., in Lancet, 1889, 1 496) gave inhalations of the acid in five cases of phthisis, in all of which the disease was fairly stationary, but bacilli were present. The subjective sensations-smarting in the eyes, nose, pharynx, and chest-were very disagreeable; cough and expectoration increased, hæmoptysis occurred in several cases, and headache and loss of sleep in all. In all the bacilli multiplied, the lungs deteriorated, weight diminished (except that one patient gained half a kilo., but was worse in other respects); in three, the temperature markedly increased; the vital capacity was diminished in four; and, though slightly increased in the fifth, the lung infiltration

decidedly advanced.

MM Gaucher and Chautard (Centralbl. für klin. Med., 1888, 39, 708) exposed the bacilli to vapour of the acid so strong as to corrode the walls of the culture vessel, but without killing them. Their influence was, however, weakened; for an animal inoculated with the virus thus treated, and killed after two months, was found to be tubercular, while those injected with bacilli not thus treated died in from fourteen to seventeen days. They conclude that the acid cannot kill the bacilli in the body, but that it may possibly weaken or even destroy their virulence.

Prof. Jaccoud (Lancet, 1888, ii. 943) showed that guinea-pigs inoculated with phthisical sputa modified by hydrofluoric acid all died, just as did those treated with unaltered sputa; and concludes from these and other experiments that the acid does not modify

the virulence of the bacillus.

Dr. Hérard (Lancet, 1888, ii. 997), in reply, quotes Trudeau of New York as proving that tubercular cultures submitted to the action of sufficiently strong solutions of the acid may be inoculated without causing tuberculosis. He further holds that as a matter of fact the inhalations do great good—if not by their action upon the bacilli, perhaps by influencing putrefaction, or modifying nutrition. (See also "Year-Book" for 1889, p. 33, § 23.)

22. Hydrofluoric acid as a germicide.

Drs. du Castel and D. Critzman (Therap. Gazette, Dec. 15, 1888) prove that in blenorrhagia a solution of the acid of 1 in 2,000 had no effect on Neimer's diplococcus, though in some cases it caused cystitis; and they conclude that injections of the acid, if weak enough to do no harm, are inert.

23. The influence of germicides on the tubercle bacillus.

Dr. G. Cornet (Zeitschr. f. Hyg., v. 98, 133) tried the effects of the following substances on animals inoculated with tuberculosis:—
Tannin, acetate of lead, hydrogen sulphide, menthol, corrosive sublimate, creolin, creasote. No one of these could be proved to have any influence over the tubercular process, although pushed till marked symptoms of poisoning by the drug were often produced.

Dr. G. Hunter Mackenzie (Edinb. Med. Journ., Jan., 1889) has discarded iodoform as useless against the tubercle bacillus; sprays of carbolic acid, iodine, corrosive sublimate, have proved similarly powerless; as have also dry inhalations of carbolic acid, creasote, eucalyptus, iodine, and bromine. He has found the bacillus

equally proof against internal remedies; and he concludes that "antiseptics in bacillicidary strength cannot be borne by man."

24. The inhalation of hot air in phthisis.

Dr. E. L. Shurley (New York Med. Rec., July 6, 1889) used
Weigert's apparatus in eight cases, with the following results:—

1. Discontinued on account of pain produced in throat and lungs.

2. Immediate improvement.

3. Nausea and vomiting induced, but hectic lessened, and flesh and strength increased.

4. Discontinued after ten days, on account of fever and pain

caused in the chest, with dyspnæa and nausea.

5. In pulmonary and laryngeal phthisis could not be borne for longer than a week.

6. In a case of advanced phthisis could not be borne.

7. Good result,

8. Stopped after fourteen days, owing to loss of appetite It was found impossible to continue the inhalations as long as advised by Weigert.
Dr. G. C. Sears (Boston Med. and Surg. Journ., July 11, 1889)

reports four cases treated by hot-air inhalations :-

1. Treatment discontinued after one week, as salivation and soreness of mouth were caused. The patient had lost three pounds in weight.

2. Marked temporary improvement; but when the treatment was left off the disease had made progress, and hemoptysis had

occurred for the first time.

3. Fairly steady general improvement, which had begun before the inhalations. Physical signs did not improve, and death from hæmoptysis followed five days after discontinuance of the treatment.

4. Condition unchanged, except that hæmoptysis occurred. Dr. A. Bowie (Lancet, 1889, ii., 540) relates the case of a patient with phthisis of four years' duration, with recurrent hamoptysis, cough, profuse sputa with abundant bacilli, anorexia, nausea and vomiting, dyspacea and orthopnoa, and marked wasting, with physical signs of phthisis at both apices. Cough and expectoration increased at first, but lessened after four weeks' treatment, and the bacilli diminished. Nausea and vomiting at once ceased, and appetite improved. At the time of the report there was no expectoration, no regular cough, and no dyspnoa, the patient being able to lie down in bed; appetite and digestion were good, weight had increased four pounds; and physical signs had improved, although there was still slight consolidation at the left apex. No medicine was given.

Professor Kohlschütter (Berl. klin. Wochenschr., March 11,

1889) mentions a case in which after inhalations twice a day for seven weeks the chest-girth increased from 89 to 95½ centimetres, the physical signs became normal, and the bacilli all but disappeared from the sputum. Cough and expectoration at first increase under this treatment, but afterwards disappear.

Dr. E. L. Trudeau (New York Med. Rec., Sept. 28th, 1889) treated four cases by hot-air inhalations for periods of from one to four months, with special reference to their effect on the bacillus. Clinically there was no positive benefit, and the bacilli still continued present, and their virulence, as tested on rabbits, was undiminished. (See also "Year-Book" for 1889, p. 35, § 24.)

25. Warm moist air inhalations in phthisis.

Dr. E. Krull (Brit. Med. Journ., 1888, ii. 832) describes an apparatus by which air saturated with moisture is supplied for inhalation at a uniform temperature of from 40° to 50° C. patient inhales once or twice daily, for 30 or 40 minutes, and after each inhalation lies with mouth shut for about half an hour. The object of the treatment is to dilate the vessels of the airvesicles, and thus pass more blood through the lungs without increasing the pulse-rate; aëration of the blood is thus promoted, and the healthy parts of the lung are better able to resist the bacillus and complete the absorption or resolution of the lowlyorganised products which perpetuate the disease. results were obtained in several advanced cases of phthisis, cure taking place in from a few months to a year. Weight steadily increases. There is often a rise of temperature soon after the commencement of the treatment, with profuse purulent expectoration; but later the temperature drops to normal, the sputa become very scanty, and the bacilli finally disappear. The physical signs verify the repair of lung-tissue. These phenomena point to the resolution of caseous masses. The treatment is contra-indicated in advanced cases with active syphilis, albuminuria, or intestinal tulerculosis.

26. Rectal injections of hydrogen sulphide in phthisis.

Dr. Pratt (Brit. Med. Journ., 1889, i. 418) used this treatment in two cases. In one there was no benefit. In the other, where 2 litres of the gas were injected twice a day, much improvement took place after six weeks; the weight and muscular power increased, but the temperature did not alter. After this the patient steadily grew worse, in spite of the continuance of the treatment. The bacilli were not affected. (See also "Year-Book" for 1889, p. 37, § 29.)

[This method appears to be practically abandoned.—E. M. S.]

27. Pulmonary ventilation and amplification of the thorax under the influence of gaseous injections.

Bergeon (Lyon. Méd., No. 13, 1889) advocates the rectal injection of carbonic dioxide in phthisis, on the ground that the gas is rapidly absorbed and eliminated by the lungs, and thus increases the pulmonary nutrition and the perimeter of the chest; augmenting the vital resistance of the lungs, and modifying the nidus in a way antagonistic to bacillary development.

28. Creasote in phthisis.

Prof. Beverley Robinson (Internat. Journ. of Med. Sci., Jan., 1889) contributes an elaborate paper on this subject. He inclines to the view that creasote favours the growth of fibrous tissue by which recovery takes place in this disease, and that it acts rather by aiding the general nutrition than as a direct bacillicide. Its effect is most marked when it is given both internally and by inhalation. Beechwood creasote alone must be used—not the commercial form, which is obtained from coal-tar. The dose should be small or moderate for some time, or the stomach may become intolerant.

From 3 to 6 minims daily may be taken for many months in half-minim doses every two or three hours, according to the following formula:—

R	Creasoti	4		mvj.
	Glycerin.	1111	***	31.
35	Sp. Frumenti	 	484	3ij.

Creasote must be perfectly dissolved and freely diluted, otherwise it is irritating. It may also be taken in capsules of 1 minim each with cod-liver oil, two or three at a dose.

The inhalations used were these :-

1st. Iodoform, creasote, eucalyptus, chloroform, alcohol, and ether.

2nd. Iodine, creasote, carbolic acid, and alcohol.

3rd, Creasote and alcohol.

One hundred and forty-three cases were treated with the creasote mixture and inhalation, and there were good notes of 66 of these. The duration of the treatment was from one week to 2 years 11½ months. There were 37 first-stage cases, 6 second, 11 third, 4 doubtful, and the rest unrecorded. The following were the results as regards the special symptoms:—

Cough.—1st stage: cured, 10; improved, 24; unaltered, 3. 2nd stage: improved, 3; others unaltered; none deteriorated. 3rd stage: improved, 5; deteriorated, 1. No record (all stages),

17.

Dyspucea.—1st stage: cured, 4; improved, 15; unaltered, 1; no record, 14. 2nd stage: cured, 1; improved, 2; unaltered, 1; no record, 2. 3rd stage: improved, 5; no record, 6.

Sputa.—1st stage: cured, 5; improved, 18; unaltered, 3; deteriorated, 1. 2nd stage: improved, 4. 3rd stage: improved, 4.

Night-sweats.—1st stage: cured, 8; improved, 4; unaltered, 3; deteriorated, 1; no record, 15; never present in 6. 2nd stage: cured, 1; unaltered, 1; no record, 4. 3rd stage: cured, 1; improved, 2; no record, 7.

Appetite.—1st stage: improved, 17; unaltered, 3; deteriorated, 2nd stage: improved, 1; deteriorated, 1; no record, 3. 3rd

stage: improved, 4; no record, 7.

Weight.—1st stage: increased, 18 ($\frac{1}{3}$ lb. to 25 lbs.); unaltered, 4; diminished, 3. 2nd stage: unaltered, 1; diminished, 2; no record, 3. Third stage: increased, 2; unaltered, 1; diminished, 1; no record, 7.

Hamoptysis.—1st stage: 4, very moderate, but in all had occurred before treatment. 2nd stage: 1, where it had occurred before. No record, 46. Hence creasote does not promote hamorrhage.

Fever.—Removed, 7; diminished, 9; unaltered, 8; increased

slightly, 1; no record, 41.

Strength.—Increased, 26; unaltered, 1; lessened, 4; no record, 35.

Throat-affection.—Cured, 6; improved, 7; unaltered, 2; deteriorated, 3.

Urine.—Generally unaltered. Where albuminous previously, it remained so. It had no odour of creasote, and in only one case was the presence of the drug shown by tests.

Physical signs.—1st stage: cured, 2; practically cured, 2; improved, 10 (at all stages).

Conclusions.—Creasote is of great value, especially in the first stage, and causes no trouble unless given in too large doses. There is evidence to show that it modifies the local changes in phthisis. It is uncertain whether it has any direct antibacillary effect. The treatment of phthisis by creasote is superior in its results to any other.

Dr. C. F. Collins (ib.), of St. Luke's Hospital, reports to Dr. Robinson that in 150 cases of phthisis treated with creasote no digestive disturbances occurred, nor any renal (even when kidney disease existed), and that the results were better than under any other treatment.

Dr. Austin Flint (New York Med. Rec., Jan. 12, 1889) believes

that in cases of consolidation without cavity creasote produces prompt and decided improvement in all the phthisical symptoms; that where small cavities exist, some benefit is obtained, but much less; whereas in cases with large cavities the drug has little more than a palliative influence. The effect on the bacilli was only noted in one case, in which they diminished.

Dr. Ruetimeyer (Brit. Med. Journ., 1889, i., 102) states that creasote is best given in an emulsion with olive, almond, or cod-liver oil; in which form it is more durable, cheaper, and fairly

palatable, and causes hardly any digestive disturbance.

Dr. J. Rosenthal (Berl. klin. Wochenschr., 1888, 32, 640, 667) prefers to give creasote in carbonated water, as in this vehicle it is pleasanter to take, and acts much more powerfully; while the carbonised water itself favourably affects expectoration and digestion. He proved that carbonated creasote water could be given hypodermically to a rabbit without any disturbance of nutrition, enough to make a dilution of 1 in 4,000 in the blood-a strength which, according to Koch, greatly interferes with the growth of the bacilli on culture-mediums. Creasote water is less useful where much fever exists, or if bacilli are abundant; it is best in the early stages of the disease. Its good effects begin in a few weeks; appetite and weight increase, expectoration lessens, and cough, dyspnea, and pain in the chest disappear. Each litre of carbonated creasote water should contain 0.6 to 1.2 gramme of creasote and 30 grammes of Cognac. Of this an amount should be given containing 0.1 gramme of creasote the first day, gradually increased to 0.8 gramme daily. (See also "Year-Book" for 1889, p. 35, § 26.)

29. Creasote and iodide of potassium in phthisis.

G. Stuecker (Therap. Monatshef., 1888, 385) recommends creasote in caseous pneumonic phthisis, but iodide of potassium in fibroid contraction of the lung with adhesive pleurisy. In mixed forms the one or the other drug must be given, according to the predominance of either process. Where purulent or mucous bronchitis exists, the balsams with or without creasote are indicated. Creasote is contra-indicated in tuberculosis of the intestine, amyloid degeneration, and late phthisis. Iodide of potassium is contra-indicated in hæmoptysis, any laryngeal lesion (because of the risk of adema of the glottis), ulceration of the traches, renal disease, and severe iodism.

30. Guaincol in phthisis.

Dr. Bourget (Lancet, 1889, ii. 555) has given creasote in large doses in phthisis for the last three years with very good results; but he now prefers guaiacol as less irritating to the stomach, and gives it in the following form :-

```
5ij

3vj

Oij

3ss. gradually increased to 3iss.

to be taken at every meal.
Gimincol
Tinct. Quinim
Vin. Malace.
```

Thus from twenty-two to thirty grains of guaiacol can be taken daily. In winter he combines it thus :-

```
(Innincol
Ol. Morrh.
```

For patients who cannot take the above, the following enema is used:

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Guaiacol
                                   An emulsion—enough for four enemas.
Ol. Amygd.
Puly. Acac.
Aq. ...
```

The patient is also rubbed at bedtime with a "lotion" of creasote (\(\mathbf{x}\vert \)) and cod liver oil (\(\frac{\pi}{\pi}\vert \)). Creasote inhalations are also given. 31. Intrapulmonary injections of creasote

phthisis.

Dr. Mackey (Brit. Med. Journ., 1888, ii., 765) injected fifteen drops of a 3-per-cent, solution of creasote in olive oil; but as the seventh injection caused hemoptysis and increased the inflammatory symptoms, the treatment was discontinued.

Dr. T. Stachiewicz (New York Med. Rec., Oct. 27, 1888) has injected creasote after Rosenbusch's method, and is convinced that the results are not so good as stated. The cough and expectoration increase after every injection; the temperature is not affected The action of creasote is the same as that of any other extraneous body, i.e., inflammatory. He concludes as follows:—If the lungs are affected only on one side, and cavities have formed, the injection of creasote may cause rapid destruction of tissue. If the patient is inclined to hemorrhage, injections are contra-indicated, as every hæmorrhage endangers life, and therefore it would be a risk to produce it artificially. In tubercular infiltrations in which there is obstinate fever with many bacilli, there is danger of miliary tuberculosis; and in such cases the injections produce destruction of tissue, and may cause demarcation of the morbid process. (See also "Year-Book" for 1889, p. 36, § 27.)

32. Intrapulmonary injections in phthisis.

Dr. Shingleton Smith (Brist. Med.-Chir. Journ., 1888, 225) discusses this question, and relates his experience of the use of various drugs:-Iodoform and iodol proved too irritating; but Dr. Cochran's camphor-carbolate for a time appeared satisfactory, until the following case occurred:—An injection of a drachm of the camphor-carbolate was made into the consolidated right apex of a man, aged 62, suffering from bacillary phthisis. Immediately much cough was caused, and the patient tasted the camphor in the mouth. Shortly irritation in the throat set in, with expectoration of much frothy mucus smelling strongly of camphor. Dyspnæa and aphonia followed, and towards evening copious purulent expectoration. The symptoms rapidly increased, and the patient died forty hours after the injection. Post mortem, it was found that general acute suppurative bronchitis had been induced.

A solution of biniodide of mercury (gr. 1/2) injected into the lung had so far caused no bad symptoms, and was probably the

best for use.

The following accidents had occurred from intrapulmonary injections:-

Acute suppurative bronchitis, fatal in forty hours.
 Acute pleurisy, two cases—speedily recovering.

3. Pneumo-thorax, temporary and harmless. (A similar case occurred to Dr. Ransome.)

 Intense pleuritic pain, lasting for hours, and needing full doses of morphia.

5. Violent fits of cough.

6. Iodoform poisoning, and hæmorrhage from the lung, were

observed by Ransome.

It has been shown that, for safety, the fluid must pass into the lung-tissue only; if it reaches the pleura, it may cause much pain and pleurisy; if a bronchus or a cavity, it may set up bronchitis.

Those cases only are suitable for injection in which the disease is strictly localised. All cases must be excluded in which both lungs are affected; and all in which the disease, though limited to

one lung, is widely distributed through it.

[In the face of the risks accompanying intrapulmonary injection, the advisability of adopting this method of treatment cannot be regarded as established; and especially if the only cases in which it is suitable are those in which the disease is strictly limited and localised, as these are the very cases which are most likely either to undergo spontaneous cure or to benefit by other modes of treatment which are free from any proportionate dangers.—E. M. S.]

33. Myrtol in phthisis.

Dr. Eichhorst (Münsch. Med. Wochenschr., Nov. 27, 1888) gives myrtol internally to overcome putrefaction in the air-passages. In capsules containing two grains each it may be taken every two or three hours for weeks without risk. It lessens the gangrenous odour of the sputa, and diminishes their quantity; but does not arrest the progress of the disease, and has no effect on the bacilli.

31. Thy mol in phthisis.

Dr. Philipovich (Lancet, 1889, i. 346) treated nearly fifty cases of phthisis with this remedy, giving doses of from 45 to 60 urains daily. Fover was markedly reduced, diarrhoea lessened, and weight (except in advanced cases) increased. No ill effects were produced. The urine under this treatment could be kept ten or lifteen days without putrefying.

85. Tumin in philisis.

Dr. E. Houns (New York Med. Rec., March 30, 1889) gave tannin to all phthisical patients in the Hôpital St. Jean, Brussels. for twenty months, with excellent results in all stages of the disease, especially where cavities existed. Grs. 15 were given three times a day, with meals. After the first few days the sputa and night sweats lessened, and appetite was often remarkably increased. Generally slight constipation was caused, but sometimes diarrhea. He had never had such good results from other modes of treatment. (See also "Year-Book" for 1889. p. 40, § 38.)

36. Antipyrin, antifebrin, and phenacetin phthisis.

Dr. Mays (Lond. Med. Rec., Oct. 20, 1888) states that good effects are produced by these remedies, not only on the fever, but also on the other acute symptoms. They are not specifics, but cut short acute attacks. There is little difference between them in their action. In all cases of fever in chronic phthisis they may be given in large doses. (See also "Year-Book" for 1889, p. 38, § 32.)

These remedies must be given with caution, as in phthisis they sometimes seriously depress the heart's action.—E. M. S.]

37. Ozone in phthisis.
Dr. A. Bansome (Manch. Med. Chron., May, 1889) has treated phthisis in all stages with ozone inhalations; iodoform, cod-liver oil, and codein being also given. Of thirteen cases in all stages (the observations mostly extending over a year), only two distinctly deteriorated; in the others the results were very good, there being entire freedom from cough, diminution of expectoration, increase of appetite, weight, and ability to sleep, and absence of night-sweats. He does not regard ozone as a direct germicide, as its control over the disease is greater than its action on the bacillus; but it probably benefits the general health, and

thus enables the tissues to resist the attacks of disease, or even eliminate it from parts already affected.

38. Iodide of mercury inhalations in phthisis.

Miquel and Rueff (Pharmaceut. Post, March 3, 1889) recommend a spray of one part each of biniodide of mercury and iodide of potassium in 1,000 of distilled water, to be inhaled at first once daily, and later twice. If too irritating, it can be used half-strength, as this solution is said to kill germs if diluted to 1 in 40,000. The treatment must be continued for a long time, perhaps a year or more. Under it cough and expectoration lessen, night-sweats disappear, weight increases, and the general condition is much improved.

39. Calomel in phthisis.

A Dochmann (Therap. Monatsh., 1888, 415) treats phthisis with calomel for several months, with the best results in the early stages; appetite increases, cough and fever lessen or disappear, and night-sweats cease. He gives it in pills of \(\frac{1}{5}\) gr. each; on the first day the patient takes six doses of two pills each; on second, five doses; on third, four; and from the fourth day onwards, 2 pills three times a day throughout the treatment. Every five or six days the pills should be stopped for two or three days. With every access of fever the dose is raised to 12 or 14 pills daily. He considers calomel to be superior to mercury in other forms, as it prevents decomposition in the intestinal canal, without having any ill effect on the digestive ferments.

G. Martell (Prag. Med. Wochenschr., 1888, No. 25) has used calomel in phthisis for three years, and regards it as the best specific antiseptic for this disease. With care there are no bad effects, The drug may be given either internally or by inhala-

tion.

40. Intra-venous injections of balsam of Peru in phthisis.

Dr. Landerer (Les Nouv. Remèd., No. 1, 1889) advocates the intra-venous injection of a very fine emulsion composed of balsam of Peru and mucilage of acacia, each 15 grs., olive oil, chloride of sodium 11 grs., and distilled water $3\frac{1}{2}$ oz. He argues that, as experiment has shown that corpuscular elements introduced into the blood are arrested preferably at those spots where there has been a previous inflammation, it may be presumed that the particles of balsam will pass specially into the tissues affected with tuberculosis, and there set up inflammation which will change the tubercular focus into a solid cicatrix. When the emulsion was injected into the veins of animals some weeks after experimental tuberculosis had been established in them, the

tubercular foci in the lungs, liver, and spleen were found to be surrounded by inflammation, and even in advanced cases by a ring of connective tissue. Intra-venous injections of the emulsion were made in four cases of phthisis, without harm to the patients, but with no definite results.

41. Pocket-flask for the sputa of phthisis.
Dr. Dettweiler (Lancet, 1889, ii. 291 and 317) is of opinion that, in order to prevent the spread of the disease, every phthisical patient should carry a flask to spit into. He has devised a suitable flask, for which Messrs. Krohne and Sesemann are the agents.

42. The inhalation of cold air in hæmoptysis.
Dr. P. de Tullio (Brit. Med. Journ., 1889, i. 1,142) has devised a metal box, through which run several tubes communicating at one end with the outer air and at the other with a receptacle from which passes off a tube with a mouthpiece. The box is filled with salt and snow, or ice, so that the tubes are covered; air is blown into these tubes with bellows, and is cooled to O°C.; it is then inhaled by the patient through the mouthpiece. In three cases, where the usual remedies had failed, hemoptysis was checked at once by this means.

43. Ligature of the extremities in hæmoptysis.

Dr. G. Seiz (Deut. Archiv. f. klin. Med., Bd. 42) advocates the old Hippocratic method of ligaturing the extremities so as to check the venous but not the arterial flow. He has found experimentally that the second pulmonary sound, and sometimes the first, is thus weakened; the heart contains less blood, arterial pressure falls, and coagulation is favoured. The treatment was very successful in two cases.

44. Sulphonal in the night-sweats of phthisis,

Dr. Böttrich (Lancet, 1889, i. 854) considers that this drug acts like atropia. A dose of seven grains will usually check the sweats, and even after the remedy is discontinued they are much less severe than before.

45. The external use of chloral in the nightsweats of phthisis.

Dr. Nicolai (Edinb. Med. Journ., May, 1889) uses a solution of two drachms of hydrate of chloral in a tumblerful of brandy and water; and the patient is rubbed all over every night at bedtime with a sponge dipped in this. Sometimes three or four rubbings will quite stop the sweats.

46. Agaricin in the night-sweats of phthisis. ("Technics, Boston," in Dub. Journ. of Med. Sci., Dec., 1888.)

-This remedy is especially useful in phthisis; the most profuse

sweating is checked with a single dose, as if by magic. The dose for an adult is gr. \(\frac{1}{8}\) to \(\frac{1}{4}\); but as much as gr. \(\frac{1}{2}\) in twenty-four hours may be given.

47. The respiratory chair.

Dr. Karl Grunert (Lancet, 1889, i. 1,259) has invented an apparatus which exerts traction upon the chest like that of the muscles in forced respiration. A cuirass makes backward and downward pressure on the thorax, while a broad band compresses the abdomen and forces up the diaphragm. The effect is to decrease the volume of the thorax, empty the alveoli more completely, and expel mucus from the bronchi. In emphysema the dyspnæa lessens, and the pulmonary heart-sound becomes less accentuated, while the mitral is increased in force. Emphysematous patients lost more or less completely the chronic bronchitis, cough was much relieved, and sleep favoured. Asthmatic symptoms were often entirely removed.

48. The therapeutic value of systematic passive respiratory movements.

Dr. H. L. Taylor (New York Med. Rec., May 4, 1889) advocates the use of the "respirator," an apparatus by which the patient's arms are strongly pulled upwards and backwards, while the chest is arched by a backward movement of the upper part; then the arms are dropped by the sides, and the upper part of the chest comes forward to favour respiration. From 160 to 480 full inspirations and expirations are made at each sitting. This apparatus is useful in the treatment of patients with ill-developed chests, and in those with old pleurisy, round shoulders, etc.

49. The functions of the stomach in phthisis.

Dr. Shetty (Deutsch. Archiv., Bd. 44, 219) argues that in spite of the apparent gastric disturbances of phthisis, and the dislike for food, the fact that "gavage" is often of great use shows that digestion is actually well performed. He made the following observations in 25 cases of phthisis:—

1. The production of hydrochloric acid was not lessened in the

morning in any case, and in some was even increased,

The digestive power of the gastric secretions was in no case destroyed, and the time occupied in digestion was normal through-

out the day.

3. The stage of the disease, or the amount of fever present, did not affect the result. Hence he deduces that the so-called gastric disturbances of phthisis are not always due to gastric catarrh or lessened secretion; and that therefore in each case the secretions of the stomach should be examined, where they are normal "gavage" being often useful.

Klemperer (Berl. klin. Wochenschr., No. 11, 1889) concludes from careful investigation that in the first stage of phthisis the hydrochloric acid secreted by the stomach is either normal or excessive; and that therefore this acid should not be given in early phthisis, although it is proper in the late stages of the He prescribes drugs to remove gastric weakness, disease. alcohol (specially Cognac), and bitter drugs. Among these, creasole stands first, given in doses of from 0.005 to 0.2 gramme, a quarter of an hour after food. He believes that the good results derived from this drug in phthisis are due to its power of strengthening the stomach rather than to any bacillicide action. Electricity and massage are also useful.

50. Lactic acid in tubercular diarrhœa.

Sezary and Aune (Lond. Med. Rec., Jan., 1889) used this remedy in a large number of cases with remarkably good results; none resisted the treatment, and the maximum duration of diarrhea was four days. From 3ss. daily, the dose was gradually increased to Sij. Digestive troubles were sometimes caused, but these censed on the addition of a few drops of chlorodyne.

H. Huchard (Rev. Gen. de Clin. et de Thérap., Nov. 22, 1888) gave lactic acid in doses of from thirty to sixty grains in the diarrhea of phthisis, without benefit.

51. Pulmonary consumption a neurosis.

Dr. T. J. Mays (Therap. Guz., Dec. 15, 1888) advances the theory that the lung disease in phthisis is only the special manifestation of a general disorder of the peripheral nervous system, the lung disease being due to neurosis of the vagus. Phthisis must, therefore, be treated like other disorders of the nervous system: exercise must be restricted, and massage and electricity should be used. It is very important that the apices of the lungs should be expanded, either voluntarily in the horizontal position, or by the inhalation of compressed air.

52. Pulmonary phthisis cured by crysipelas. Waibel (Münch. Med. Wochenschr., 1888, 841) records the case of a patient with marked hereditary predisposition, who for two months had shown distinct evidence of phthisis-fever, nightsweats, sputa containing blood, emaciation, dyspnea, and increasing weakness, with consolidation and râles at the right apex. For five weeks he grew steadily worse, and the left lung began to be involved. He now had a very severe attack of facial erysipelas, with high fever, which lasted about a week, and threatened to be fatal. After recovery, fever had disappeared, cough was but seldom heard, and appetite became prodigious, and in three months the patient was perfectly strong.

afterwards he was still healthy, and a mere trace remained of the former lung lesion. The disease was undoubtedly phthisis, and it is probable that the continuous high temperature during the attack of erysipelas destroyed the bacilli.

53. Milk in pleurisy.

Serre, Eloy, and others (Lond. Med. Rec., Oct. 20, 1888) state that the fluid in pleurisy is removed more quickly on a milk diet than by means of diuretics, purgatives, and blisters. The diet causes notable increase in the amount of the urine. It is suited only to cases that can "wait," as it takes four or five days to act. From 3 to 6 pints should be taken in the twenty-four hours. Elov says that thus the urethra may take the place of the trocar.

54. Caffeine in pleurisy.
M. Comby (Lond. Med. Rec., May 20, 1889) advocates the use of caffeine in acute serous pleurisy, in doses of 25 grs., with an equal amount of benzoate of soda, in twenty-four hours, the patient being kept on a milk diet. The urine has been found to increase from 600 grammes in twenty-four hours to 2,000, the effusion rapidly disappearing. This treatment is well borne if the kidneys are sound.

55. Saline cathartics in pleurisy.

Dr. P. B. Smith (Brit. Med. Journ., 1888, ii. 809) advises the absence of fluids, and purging with salines in pleuritic effusion, sulphate of magnesia in doses of 3ij to 3iv being given twice a day. This treatment is suitable where the effusion is large and recent, the dyspnæa not pronounced, and the patient not debilitated nor having a phthisical tendency.

56. Salicylate of soda and salol in pleurisy.

Dr. J. Drzewiecki (Therap. Gaz., Oct., 1888) has published cases of pleuritic effusion treated by salicylate of soda, in which pain was removed or much relieved in twenty-four hours, the temperature speedily fell, and the effusion disappeared—the patients being well in a fortnight. He believes the drug to have a specific action in pleurisy. Half an ounce of a 5-per-cent, solution is given every hour till buzzing in the ears is caused, then every two hours. He now prefers salol, which is as effectual, and causes no discomfort. From 2 to 3 drachms must be given daily. The urine always becomes dark after exposure; the colour is only important if it is present when the urine is passed.

57. Inhalations of compressed air in phthisis. Prof. Forlanini (Lond. Med. Rec., Feb. 20, 1889) promotes expansion of the lung, after removal of the fluid, by means of a simple and cheap apparatus which he has devised. Even in tubercular cases much good is done: appetite increases, tissuechange is promoted, and the patient's condition is generally improved. (See also "Year-Book" for 1889, p. 42, § 48.)

58. The injection of sterilised air in pieuro-pneumothorax.

M. Potain (Centralbl. f. klin. Med., 1888, No. 27, 489) states that in removal of the fluid the risks are that the perforation may reopen and cause empyema, and the rapid expansion of the lung may produce rupture at other points, or awaken quiescent tuberele. He therefore replaces the fluid as it flows with an equal volume of air filtered through cotton-wool and shaken in a bottle with carbolic acid, whence it is conveyed into the chest with a tube and a hollow needle. Thus the intra-thoracic pressure is unchanged, and the air introduced is very gradually absorbed. Two successful cases out of three due to phthisis are recorded.

59. The treatment of pneumo-thorax by permanent fixtula.

Bouverst (Bull. Méd., 1889, No. 7, 107) applies the term "sufficative" to those cases of pneumo-thorax in which intense dyspnea sets in, rapidly ending in death from asphyxia, owing to the presence of air in the pleural cavity under a high degree of tension. He holds that this tension cannot be produced by escape of air into the pleura during inspiration, but only during cough, and hence cough must be checked by full doses of opium. But in the cases described above, the air must be let out by a permanent fistula, just as if it were a huge liquid effusion; and the cannula should be left in position and covered with an antiseptic dressing, to prevent the occurrence of pyo-pneumo-thorax.

[In the condition described I have seen recovery follow simple puncture with a hollow needle, which is withdrawn as soon as the intra-pleural tension is relieved; this method should therefore be tried before more severe measures are adopted.— E. M. S.]

60. A new operation for chronic empyema.

Prof. Saubotine (Gaz. Hebdom. des Sci. Méd., Jan. 26, 1889) says that to cure a case of empyema where complete collapse of lung exists the ribs need not be removed, but subperiosteal section is enough. If a rib is incised at two points, and pressure is made on the middle segment, the normal convexity of the rib is entirely reversed, and the chest-wall is thus brought close to the lung. The skin is divided horizontally along the seventh rib, from two to four inches of which are resected; the pleura is opened, emptied, and washed out, and the wound is then closed and scaled. An incision is next made along the border of the pectoralis major,

and through this the fourth, fifth, and sixth ribs are divided, and a small piece is resected to make them movable. A similar incision is then made in the subaxillary line, and the same ribs are again divided. The two incisions are then sutured and dressed antiseptically. The advantages of this operation over Estlander's are that the wounds in the ribs do not come into contact with the pus, and heal like subcutaneous osteotomies; and that the divided ribs are bent in and greatly reduce the pleural cavity, and, consolidating in this position, support the spine and lessen the tendency to lateral curvature.

Empyema in children treated by resection of rib and injection of iodoform emulsion.

Mr. W. A. Blake (Lancet, 1889, i. 326) records six cases of empyema in young children in which a rib was resected, lymph was removed with a sharp spoon, and an injection of four ounces of iodoform emulsion was made into the pleural cavity, of which one ounce was allowed to remain. In all the cases the wound healed within sixteen days.

[Children do so well when the pleural cavity is simply opened and drained that there is no need for any further interference at the time of operation, unless in special cases. It must be borne in mind that pleural injectious cannot be used without a certain amount of risk.—E. M. S.]

62. The surgical treatment of abscess of the lung and empyema.

(Abstract of a discussion at the annual meeting of the British Medical Association at Glasgow, Brit. Med. Journ., 1888, ii.

Mr. T. Pridgin Teale, who opened the discussion, related some

illustrative cases, and drew the following conclusions :-

(1). That abscess in the neighbourhood of the diaphragm is often found post mortem, even when missed in exploring during life; but that the bolder surgery of to-day will probably make this less frequent.

(2). That the danger of the admission of air into the pleural cavity is not collapse of lung, but that when the lung and pleura are fairly healthy, the inrush of air seriously reduces the mechanical power of the thoracic wall over the function of inspiration.

(3). That the abscesses met with in the neighbourhood of the disphragm, often beginning below the disphragm and tending to discharge through it and the lung, are probably more safely reached through the lower angle of the thorax, provided that dulness exists, than through the abdominal wall.

(4). That the cavity of a pleuritic or pulmonary or hepatic

abscess should be washed out only in the early period of treatment, while the discharge is offensive.

(5). That excision of the rib in empyema is probably only rarely needed.

Sir Spencer Wells had opened and drained a lung-abscess, in 1843, in a patient who was then dying of phthisis, but who was still alive and well.

Dr. Ward Cousins used a drainage-tube only for the first few weeks after opening an empyema, and afterwards kept the opening free by daily inflation with an india-rubber bag. Irrigation was useful while the discharge was offensive.

Mr. Jessop had seen no damage from the accidental opening of the idental cavity, and the lung did not collarse.

Mr. J. Duncan laid stress on the importance of free excision of the ribs in old-standing cases of empyema where the cavity did not become obliterated.

Dr. Webb advocated free opening and drainage in all empyemata, and daily washing-out of the cavity.

Dr. Wardrop Griffith considered that primary resection of a rib was seldom needed. He thought that the expansion of the lung after free opening of the pleural cavity was due to the valvular action of the dressing; and that the functionally active portion of the lung did not collapse.

Mr. Edmund Owen said that in children the spaces were so small that almost as a routine it was well to resect the rib. He had opened a hydatid tumour of the liver across the healthy pleural cavity without setting up pleurisy—the cyst being fixed to the costal pleura by hare-lip pins a few days before it was incised.

Mr. Jordan Lloyd thought that some of the cases of supposed lung abscess were really interlobular empyemata. He advocated a long incision to secure free drainage.

Mr. Teale, in reply, said that the fear of collapse of lung was a "bugbear." The diagnosis of abscess of lung from empyema was not easy; the most important point was the co-existence of stinking pus with clear pleural fluid.

[The routine washing-out of the pleural cavity in empyema is to be avoided, as it is unnecessary, and the process may cause serious accidents. When the pus is sweet at the time of operation, it should simply be evacuated by an incision free enough to admit two fingers, so as to allow of the escape of any masses of lymph or cheesy matter; and in most cases nothing more is needed beyond the insertion of the drainage-tube. Even when fetid pus is met with, irrigation is not always essential; as it will be found that, provided the drainage is free, the discharge will

usually become sweet in a day or two under an antiseptic dressing. Primary resection of a rib is seldom needed even in children, as the opening can in most cases be kept free by the use of a suitable tube; and it is desirable not to incur unnecessarily the risk of the contact of pus with wounded bone.—E. M. S.]

63. Incision and drainage in abscess of the lung.
Dr. S. C. Smith (Lancet, 1889, ii. 113) records the case of a
woman who had been ill for two months with hectic and constant
fetid expectoration. An incision was made below the angle of
the right scapula, and sinus-forceps were "bored" into the cavity,
the sputa at once becoming blood-stained. In a month the

patient was up, wearing a tube.

Prof. F. M. Opensovsky (Vratch, No. 38, 1888), in a patient with pulmonary abscess from gangrene following pleuro-pneumonia four months previously, resected 10 cm. of the fifth and sixth ribs, found the pleura adherent, opened the pulmonary cavity with the thermo-cautery, introduced the whole hand into the cavity, removed a gangrenous patch from its interior, applied the cautery to the surface, washed out the cavity, and inserted a tube. The cavity was regularly irrigated. The patient left well on the eighty-first day.

Dr. J. D. Harris (Brit. Med. Journ., 1889, i. 994), three and a half months after pneumonia occurring in a man aged thirty-three, inserted an aspirator needle into the resulting abscess-cavity in the lung, cut down upon the pleura, and, finding its surfaces slightly adherent, passed the knife along the needle into the cavity, and inserted a gum catheter six inches long. Antiseptic dressings were employed, and the cavity was washed out daily. In two months the patient was well, large tracts of lung previously imper-

vious to air having cleared up.

64. Suppurating hydatid of lung treated by aspiration and cleansing with carbolic lotion.

Mr. G. Palmer (Lancet, 1888, ii. 1,125) details the case of a patient aged twenty-five who was suffering from hectic due to a suppurating hydatid of the lung which had opened into the bronchi, through which small cysts and fetid pus were freely discharged. As the cavity was central, with superficial healthy lung, the aspirator needle was inserted deeply at the angle of the scapula, and fetid pus was withdrawn. The cavity was then washed out through the needle with a one-in-eighty carbolic lotion, which was withdrawn after a few minutes. Hemophysic occurred two nights later. The operation was repeated well two months after admission.

65. Bronchiectasis treated by incision and drainage.

Dr. D. W. Finlay (Brit. Med. Journ., 1888, ii. 807) cites the case of a boy, aged ten, in whom physical signs of a shrunken right lung and bronchiectasis existed, with copious most fetid purulent sputa. Over the site of the most marked cavity-signs a trocar and cannula were passed in, and fetid pus spurted out; an inch and a half of the eighth rib was excised; and as the pulmonary pleura was not adherent to the parietal, it was stitched to the chest-wall. The lung was incised, and a tube inserted. Pleurisy was set up below the opening; on the tenth day blood escaped from the wound and by the mouth; and the patient died five days after. A small piece of bone was found in the main bronchus; a main branch of the pulmonary artery had ulcerated through into the cavity, and there was a localised empyema below the pleural opening.

Of twenty-two cases of uncomplicated bronchiectasis in which the cavity was opened, four were cured, five relieved or partially cured, and fifteen died; three from cerebral abscess. Severe hamorrhage occurred in three cases, probably from ulceration caused by the tube. Dr. Finlay concludes that operation is justifiable in chronic cases where copious fetid expectoration exists, and where no good is got from ordinary treatment; and especially if the sound lung is becoming affected. The risk of cerebral abscess must also be remembered. It has been recommended to secure adhesion of the pleura before opening the lung; in this case stitching the two surfaces together was not enough.

and a limited empyema resulted.

Dr. E. Mackey (Brit. Med. Journ., 1889, ii. 660) adopted the same treatment in the case of a man, aged twenty, with signs of bronchiectasis in both lungs and of a large cavity below the angle of the right scapula. The cavity was opened (the pleura being adherent) and irrigated, but death soon followed. The lower lobe of the right lung was found to be riddled with cavities, the end of one of which was opened by the operation. There were gangrenous patches in the left lung, but no cavities or fibrous disease.

66. The incision and drainage of pulmonary cavities.

Dr. A. James ("Pulmonary Phthisis" [Young J. Pentland], 1888) lays it down that to be amenable to surgical treatment a cavity should be large, single, and basal. At the apex the thoracic walls are too rigid to allow the contraction necessary to the cure of a cavity; and also cavities in this part are generally multiple. 67. An experimental contribution to pulmonary

Dr. V. M. Zakharevitch (New York Annals of Surgery, April, 1889) made thirteen experiments on rabbits, eleven on dogs, and nine on the human cadaver. After resection of ribs he dragged out a portion of lung, ligatured and cut it off, powdered the stump with iodoform, returned it, and stitched up the wound hermetically.

Results of the operations.—Of thirteen in nine rabbits, only two were fatal; in one the whole lower lobe of the opposite lung being infiltrated with tubercle. Of eleven in dogs, three were fatal—one from empyema, the other two on opening the chest

at a second operation two months after a successful one.

Physiological Effects. — Respiration is quickened and deepened, or retarded and deepened, more or less permanently; pulse is quickened, and intermittent just after the operation. Rectal temperature rises somewhat, becomes normal on the fifth day, and afterwards permanently subnormal. If the thoracic cavity gets unsealed, alarming dyspna occurs, which is removed by closing the thoracic wound.

Anatomical changes. — Chest contracts uncontrollably; there may be localised or suppurative pleurisy; the ligatured part of the root generally lives, but sometimes sloughs off and lies free in the pleural cavity; the rest of the lung is always much enlarged, and its surface is sometimes studded with ecchymoses; the liver, and especially the heart, are almost always enlarged; and sometimes the mediastinal and retro-peritoneal lymphatic glands are enlarged, either from hyperplasia or from caseation.

Experiments on the human cadaver showed that to extirpate the two upper lobes the second rib must be excised; and for the lower lobe, the third. The best position for a counter-opening is in the eighth space, along the scapular or post-axillary line.

Conclusions,-(1). Dogs and rabbits bear pneumonectomy well.

(2). The minimal respiratory area is two lobes; but if only one lobe in each lung is healthy, neither lung can be operated on, as the opening of the thorax on one side is followed by collapse of that lung.

(3). More active operative interference with the lung than has

hitherto been attempted is justifiable.

DISEASES OF THE NERVOUS SYSTEM.

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AND

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1. General summary.

It is much to be regretted that such slow progress is made in the treatment of a large number of nervous diseases. Doubtless many cases are not only essentially chronic, but also incurable, especially such as are due to the presence of the results of chronic inflammation in the various nervous centres, and these, of course, form a very large group. A possibility of early diagnosis in such cases, however, together with such a method of treatment as would arrest and cure them in the early stages, is very desirable. Surgery by its rapid strides and scientific application has now, fortunately, been able to cure diseases of the nervous system which were before absolutely hopeless, and we all trust that still greater advances in this direction will be made.

During the past year the treatment of this branch of diseases, which has received the most marked attention, is that of suspension in locomotor ataxia. The reader will be able to judge for himself, from the account given below, to what extent this method has succeeded at present, or is likely to succeed in the future. That it alleviates many of the sufferings of the ataxic no one who has used the method can doubt; but that it can remove the sclerosed patches in the cord, and so cure the disease, is almost certainly beyond the range of possibility. It is, indeed, merely palliative.

A somewhat lengthy account has been given of hypnotism, as it is at present exciting much discussion on the Continent, in America, and in England. It will certainly be noticed that the most authenticated cases of cure are in the various forms of hysteria; and Bernheim's theory of suggestion by means of which

the mind influences the body seems to us to throw much light on the subject. Care, however, should be taken that too much is not made of cures by hypnotism; for instance, it is difficult to conceive how it can cure skin diseases, rheumatism, or gout.

In treating such nervous diseases as chorea, again, the influence of drugs must be most carefully considered before statements are made concerning them. For here we have a disease which in many cases, with quiet, rest in bed, and good feeding,

recovers independently of medicines.

The same fact of course applies to the treatment of insomnia; though there is no doubt that in sulphonal we possess a new remedy which is of great service in a large number of cases, yet by some observers its effects seem to be somewhat overrated.

2. The suspension treatment of locomotor ataxia and some other chronic nervous affections.

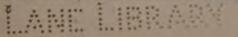
This was discovered accidentally so long ago as 1883 by Dr. Motschowkowsky, of Odessa, who noticed that after the suspension (to apply a Sayre's plaster jacket) of a patient suffering from both spinal curvature and locomotor ataxia, the symptoms of the latter were much relieved. He then found that other ataxics were similarly benefited—that the lightning pains, the inco-ordination, and the vesical and sexual troubles were all alleviated. He published an account of fifteen cases (Vratch, Nos. 17 to 21, 1883; Neurolog. Centralbl., 1883, p. 427; Physician and Surgeon, No. 10, 1883), and the method was mentioned by Mr. John Marshall (Lancet, Dec., 1883) in the Bradshaw lecture for 1883 on the relief of pain by nerve-stretching.

M. Raymond, visiting Russia in 1888, saw the method, was much impressed by it, and told Chartot the details. Since that time it has been prominently brought before the medical world by Charcot, and many papers have been published on the subject

during the past year.

Professor Charcot published a paper (Progrès Médical, Jan. 19, 1889) on his results in eighteen cases. He found that the walking was improved, and then Romberg's sign (swaying movements on closing the eyes) disappeared after twenty or thirty sittings. The vesical troubles were lessened or improved, the lightning pains were relieved, and sexual impotence gave place to sexual desires and erections. He finally suggests that it may act by modifying the circulation of the cord, or by stretching the nerves leaving it.

Dr. Paul Blocq (Rev. Gén. de Clinique, Feb. 14, 1889) confirms the above statements, and mentions a case of Friedreich's disease



in which suspension was tried, with much improvement in two weeks, especially in the inco-ordination, but the reflexes remained

absent, and the nystagmus and scansion continued.

Dr. Gilles de la Tourette (Le Progrès Médical, Feb. 23, 1889) gives a full account of the method to be employed; and Dr. A. de Watteville has brought out a small book entitled "The Treatment of Locomotor Ataxia by Suspension," translated from the French of Prof. Charcot, with four illustrations, and notes. Here we find an excellent account of the method to be employed, which is as follows :- The apparatus to be used is the ordinary Savre's apparatus, with a transverse bar eighteen inches long, with straps for the armpits and two straps for the occiput and chin. The head-straps should be very carefully padded, and fixed so as not to cut the patient; and the shoulder-straps so arranged that the whole weight of the body is not put on the neck. When fixed. traction should be applied very slowly; the patient must keep perfectly still, and should be steadied by an assistant when off the ground. The patient then very carefully abducts the arms at intervals of fifteen to twenty seconds, to transfer more weight to the head. The average time for suspension is three minutes, never more than four minutes; and for the first suspension half a minute is quite sufficient. If the patient weighs only 130 to 140 lbs. he may be suspended for two minutes at the first; if heavier than 180 lbs., much more caution must be used. The sittings should only be once on alternate days. After suspension the patient is slowly lowered and put into an arm-chair. During suspension both the coat and the collar should be off. It is better not to use the ordinary tripod support, but to suspend the pulleys from a hook in the ceiling. Dr. Watteville uses a special arrangement of strings pulled through a hole in an iron disc in order to adjust the straps; and he also places a spring balance between the pulley and the transverse bar, in order to weigh the patient and estimate the tension applied. He says, finally, that the physician himself ought to superintend the operations.

Dr. Saundby (Brit. Med. Journ., 1889, i. p. 565) says that light patients may be suspended by the head alone. He likes the

tripod, as it gives confidence to the patient.

Dr. W. Morton (New York Med. Rec., April 13, 1889) says that by no other means has equally marked progress and decided improvement been attained. If the patient is sufficiently powerful, he lets him suspend himself with only a head-strap, and thinks the raised position of the arms is an advantage.

Dr. Althaus (Lancet, 1889, i., p. 1236) uses a windlass with a catch on one leg of the tripod-stand, in order to raise the patient

more steadily. He confirms the good results obtained in locomotor ataxia, and recommends it also in chronic rheumatism, rheumatic arthritis, and suasmodic torticollis.

At a meeting of the Berliner Gesellschaft für Psychiatrie und Nervenkrankheiten, May 13, 1889, Bernhardt reported nineteen cases of locomotor ataxia treated in the above manner. He noticed an improvement in the pains and the power of walking, in the bladder, and sexual symptoms, but no improvement in the ataxia. He thinks the good effect was merely temporary, and only palliative to certain symptoms. Dr. Remak said that suspension ought not to be used where there is heart disease.

De Renzi (Rivista clinica e terapeutica, March, 1889) employed suspension in a case of chronic spinal meningitis with very rapid

amelioration.

Abadie and Desnos (Centralbl. für die Med. Wissensch., No. 12, 1889) say that the vision of ataxics is improved by this method.

Eulenberg and Mendel (Neurolog. Centralbl., January 1, 1889) give the results of forty cases of chronic nervous disease treated by suspension. The average number of suspensions in each case was twenty-four, and the operations were performed as a rule three times a week, the average duration of suspension being one minute. Thirty-four of the cases were ataxics, in whom the sleeping powers, the general health, the swaving on closing the eyes, and the bladder disturbances, were improved, but the myosis and loss of knee-jerk were uninfluenced. In ten cases, there was an improvement of the neuralgic symptoms; in nine, of locomotion; in five, of paraesthesia; in five, of hyperæsthesia and anæsthesia; in one case gastralgia, and in many, pains in the head were cured. They think that the method is not so satisfactory as was at first supposed, and that a psychical factor may play an important rôle in the symptomatic improvements. Of the other cases, one was a case of disseminated sclerosis, in which, after sixteen suspensions, the insomnia, the headache, the paresthesia, and the paresis of the ocular muscles were less marked. One case of chronic myelitis and one case of traumatic neurosis were not improved.

W. Hammond (New York Med. Journ., May 11, 1889) has used the method extensively, and confirms the statements of previous observers. From later experience, he likes suspension entirely by the head, and uses a spring balance. If the body is very light, he fastens weights to the feet, or fixes the latter to the floor. He says vertigo may result from the suspension, or paralysis of both arms from pressure (after two minutes' suspension in one case).

Weir Mitchell (American Journ. of Med. Sciences, May, 1889)

says that in Art. from so suspension should be used early, and given given because or so were essenting the curvature.

Lauser Brunton of Journ. Brit. Med. Journ. 1889, in Soft limit product suspension acts like massage on muscles to ten did in the and the products of nerve wastes from the roll of a distribution of the same time the processes of oxidation and report of the blood.

2. Dangers of Suspension. Goreak Article for the 1881 in p. 1247) reports a case of

at others will was suspensed by his servam daily. He improved so sever have been at the arms and thought on the speech and hearing, has paralytic of the arms and thought muscles, and died in twenty-tory near a sufficient of the New York a medical man case of the content of which providing self-suspension alone.

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of contra- (distributions for suspension) —

1. Cause: affecting the personal condition of the patient, as debutty around a selenta and operaty.

 Coerair careful parametery and nervous conditions, as employeems, perform valvant disease of the heart, and spasmodic nervous affections.

 Gerta to recall becomes to mortility to spontaneous fracture of bones, or such a state of the teeth as to prevent the patient supporting the chirastrap.

4. Hypnotism.

Grossman Abelt. Med Joseph 1888, E. p. 1413; at Liverpool gave a good epitome of hyproxism, mentioning first the work at the Superriere with Charcot's three stages of an Lethargy caused by fixing a bright light on the eyes, or compressing the eveball; (b) catalogs y projected by lifting the eyelids during lethargy; and (c) somnambulism produced by gently rubbing the vertex in either of the foregoing states. Many susceptible persons have hypnogenetic points, stimulation of which produces lethargy. He then went to Nancy, and saw the work of Drs. Liébault and Bernheim. where he learnt the difference between the Paris and the Nancy schools. The latter physicians suggest sleep by a comfortable position, by closing the eyes, and talking about sleep to the patient in a quiet manner. They maintain that there are nine degrees of hypnotism, varying from a mere feeling of local warmth and decrease of pain, up to a condition of complete somnambulism. They also think that lethargy, catalepsy, and somnambulism do not exist as independent states, but are productions of suggestion; that hysteria is not a good field for a study of hypnotism, from the intervention of purely emotional

symptoms; that the hypnotic sleep is purely physiological; that suggestion is the key of all hypnotic phenomena; and that hypnogenetic zones do not exist unless suggested.

Dr. C. Lloyd Tuckey (Lancet, 1889, ii., p. 268) gives ten cases treated by hypnotism-viz., insomnia, chronic diarrhea, paroxysmal sneezing, nocturnal enuresis, functional dysmenorrhea, torticollis, headache, restlessness and uterine pain after confinement, partial scrivener's palsy, and dipsomania—all cured, and one case of tabes dorsalis relieved of all symptoms. He adds that Profs. Fontain and Sigard of Toulon (Revue de l'Hypnotisme, Feb., 1889) benefited a man suffering from disseminated sclerosis (afterwards confirmed by post-mortem examination) so much that he was able to leave hospital. He also thinks that it will prove useful in the lying-in room, as several observers relate cases in which women have been painlessly confined under its influence.

Moll (Lancet, 1889, i., p. 1165) has communicated to the Berlin Medical Society his results of 120 cases treated by hypnotism. He says he was successful only when the "psyche" of the patient was disturbed, but had failures as well as successes. He mentioned several cases which, however, were probably purely hysterical, and the others were very doubtful, such as chorea of two years' duration cured by three months' hypnotism, but with a

relapse in eight months.

At the International Congress on Hypnotism, held at Paris, 1889 (Lancet, 1889, ii., p. 460), it was decided that all public exhibitions of hypnotism should be prohibited. MM. van Renterghem and van Eeden, of Amsterdam, gave the results of several cases of organic diseases of the nervous system—neurotic, mental, and neuralgic cases—treated by this method. In 71 cases there was no result, in 92 slight amelioration, in 98 marked amelioration, and in 100 cure: 57 cases were not worked out. M. Bernheim explained fully the Nancy theory of all hypnotism being merely suggestion. He said that hypnotism is not mere sleep, but a peculiar psychical state, the sleep indicating a profound condition of hypnotism only. He thought that Braid's method of fixation by means of a brilliant object is not so good as Faria's method by "verbal suggestion." What he called "suggestive psychotherapeutics" had for its object the cure of the patient by causing his brain, whether hypnotised or not, to be possessed of the persuasion of cure, or the cessation of his symptoms; and said that the different methods of hydro-therapeutics, of electrotherapeutics, and even the suspension method of locomotor ataxia, acted in a like manner.

Amongst the numerous cases reported as cured by hypnotism

during the year it is interesting to note that most of them are more or less hysterical in nature, sucli as contracture of both hands (Boch, Clinique Brux., 1888, ii., p. 770), insomnia (Hugenschmidt, Med. and Surgic. Report, Philadelphia, 1888, lix., p. 691), a case of moral perversity (Voisin, Rev. de l'Hypnot. Expér. et Thérap., 1888, iii., 130), traumatic hysterical monoplegia cured by a single sitting (Tournée, Progrès Médic., 1888, 25, viii., p. 430), chronic vomiting (Gil y Ortega, Salamanca), and many others.

Several books have been published, and one journal; they

are :--

"Suggestive Therapeutics: a Treatise on the Nature and Uses of Hypnotism." H. Bernheim. Transl. from French by Christian A. Harter. New York: G. P. Putnam. 1889.

"Eine Experimentelle Studie auf dem Gebiete des Hypnotismus." Professor R. v. Krafft-Ebing. Stuttgart: Encke. 1889.

- "Psycho-Therapeutics; or, Treatment by Sleep and Suggestion."
 C. Lloyd Tuckey, M.D. (Lond.). Baillière, Tindall, and Cox. 1889.

 —This gives an epitome of the Nancy school, and a list of diseases cured by hypnotic suggestion, such as amenorrhæa, menorrhægia, writer's cramp, migraine and chorea, alcoholism, rheumatism, gout, anæmia, general debility, chronic constipation, diarrhæa, and skin diseases.
- "Hypnotisme et Suggestion." E. Santini. Paris: 1888. Le Bailly. 31 fr.—A study of the general phenomena of hypnotism, of the perversion of the senses, and of the hallucinations produced by verbal and mental suggestion.

"Ein Beitrag zur therapeutischen Verwerthung des Hypnotismus." Albert von Schrenck-Notzing. Leipz.: 1888. F. C. W. Vogel. 94 fr

- "Isterismo ed Ipnotismo. Manuale ad Uso degli Studentie dei Medici Pratici." Crescenzo Conca. Napoli: 1888. V. Pignataro.
- "Revue de l'Hypnotisme Expérimentelle et Thérapeutique."
 Paris.

5. Neurasthenia.

L.C. Gray (New York Med. Journ., 1888, xlviii., p. 421) recognises three forms of neurasthenia— reflex, lithæmic, and simple. In the last alone is there true nervous prostration. It is difficult to tell neurasthenia from symptoms of true insanity or melancholia, or from the "muscular hypertonicity" of Hughes Bennett (when the neurasthenic symptoms assume the appearance of lateral sclerosis, but end by spontaneous cure). The treatment of the reflex form is causal. The lithæmic form requires acids, laxatives, and rest, with starchy and nitrogenous food much

diminished. True simple neurasthenia does well under the Weir-Mitchell treatment, with large doses of malt and iron. Patients, however, are much disappointed with the loss of muscular strength on getting up, and care must be taken to prevent a relapse. Galvanism is of great use when the patient is not kept in bed, and must be applied with large sponges to the neck and loins—five to fifteen milliampères for three to five minutes daily. Massage

he considers of doubtful value, as it often irritates.

In a book entitled "Congestive Neurasthenia; or, Insomnia and Nerve Depression" (H. K. Lewis), Dr. E G. Whittle describes particularly a certain class of cases in which treatment by tonics and stimulants is not always to be commended. The symptoms of these are a feeling of discomfort about the head, with throbbing after food and exertion, vertigo on stooping or after excitement, melancholia with or without delusion, and insomnia, and a disposition to wander about at night. In well-marked cases the face is wrinkled by muscular contractions, and though the nutrition may be good and the face ruddy, there is a careworn expression. Flatulence may be troublesome, although the digestion and appetite are fairly good. He uses a dozen leeches, applied to the mastoid processes; and if these fail, venesection.

6. Hysteria.

Dr. Thermes has published a book entitled "Traité Élémentaire d'Hygiène et de Thérapeutiques de l'Hystérie" (Paris). He recommends, as at the Salpétrière, isolation, hydro-therapeutics, static electricity, and especially hygiene. He does not discourage marriage in hysteria, except when he has to do with a case of hereditary hystero-epilepsy.

Didier (Lyon. Med., 1888, lix., p. 473) regards electricity as the best means of arresting hysterical crises; the electrodes are placed in the front of the neck and on the epigastrium, and the crisis stops after some seconds or a few minutes. This method

fails in epilepsy, and can thus serve as a diagnostic agent.

7. Epilepsy.

Bournville has published "Recherches Cliniques et Thérapeutiques sur l'Épilepsie, l'Hystérie, et l'Idiotie: Compte rendu du Service des Épileptiques et des Enfants arrières de Bicêtre pendant l'année 1887." The first part contains an account of the routine and administration of the department mentioned, and the methods of teaching backward children. The second part is mainly an account of "procursive" epilepsy.

Hugh Woods (Brit. Med. Journ., 1889, ii., p. 312) administered two capsules of 4 grains each of amyl nitrite to a young man in status epilepticus, the fits occurring every fifteen minutes, with intervals of unconsciousness and stertorous breathing. There was an improvement at once, and the fits did not recur, consciouspess

returning after a short time.

Alexander has published a work on "The Treatment of Epilepsy." Some years ago this author proposed treating epilepsy by ligature of the vertebral artery, but he has now abandoned this and brought forward another treatment-namely, excision of the superior cervical ganglion, with the theoretical object of altering the nutrition of the brain through its blood-supply. The details of the operation are, of course, surgical, but his results are as follows :- He treated 24 cases, and after an interval of four to six years 6 were cured, 10 improved (especially in mental condition). and 5 unimproved. He says he noticed no bad effects, except contraction of the pupil and drooping eyelid, but no glycosuria or cardiac phenomena; there was an increased vascularity of the pia mater on the same side. He also found that percussion of the spine, from the lumbar to the cervical region, by a mallet over a rubber pad will afford temporary relief in arresting the fits, and that galvanism may also be employed with it; but this method is not curative.

Péré showed before the Soc, Méd. des Hôpitaux two epileptics treated by the actual cautery dotted over the scalp. One of them had been under treatment since February, 1887, had 21 attacks in 1886, 7 in 1887, and 1 in 1888. The other case had 63 attacks in 1886, 45 in 1887, and 5 in 1888. In several other cases he brought about an ephemeral improvement, or a modification of the paroxysms. In one convulsions have ceased, and been replaced by cutaneous hyperæsthesia.

S. Exophthalmic goître.
Professor Valieri, of Naples (Bull. Gén. de Thérap., Sept. 15, 1888), proposes to substitute common hemp (cannabis sativa) for Indian hemp in certain diseases. The tops of the fresh plant and the dried flowers are used. The physiological action is similar to that of Indian hemp, but the cerebral symptoms are slight or absent. The dose is double that of Indian hemp. He cured three cases of exophthalmic goitre with it, all ordinary remedies having failed.

Dr. Daniel R. Brower (Journ. Amer. Med. Assoc., vol. xi., No. 18, 1888) has used strophanthus in three cases of exophthalmic goître with benefit. In one case, a man, with three months' illness, cure resulted in four weeks. Tincture of strophanthus was given—two minims every six hours, gradually increased to ten minims. The pulse fell from uncountable to 85, and the exophthalmos and the goitre disappeared. The strophanthus was

then slowly withdrawn, and tonics were given. Ordinary hygienic rules must be observed, avoidance of fatigue of all kinds, good diet, and attention to the bowels and skin. He also uses gal-

vanism to the cervical sympathetic.

Dr. Dale, of Lemont, Pa. (Med. News, Philad., vol. liii., 716), has also successfully treated a case of exophthalmic goître with strophanthus. The patient was a woman aged 35, who had been ill seven months; the pulse 120 and irregular. Tincture of strophanthus was given, five minims thrice daily. In two weeks the pulse was 80, regular in rhythm. He then gave tonics, arsenic and iron; but extensive anasarca set in, and these were stopped. Under the continuous use of the strophanthus and faradic current to the goître, all the symptoms were ameliorated.

9. Chorea.

(a) Antipyrin.—Abjos (Gyógyászat, 1888, xv.) injects subcutaneously a 50-per-cent. solution of antipyrin. He-commences with seven and a half minims, and doubles this daily, until sixty minims are given. The disease is said to be cured rapidly.

Prof. H. C. Wood (Albany Med. Journ., March, 1889) says antipyrin is a more successful remedy in chorea than arsenic. With the latter the average duration of the treatment is 60 to 90 days; with antipyrin he has completely stopped the convulsive

movements in one week.

Legroux (Berl. klin. Wochens., March 25, 1889) considers that 15 grains of antipyrin three times a day is a most effectual remedy. He cured six cases within a month.

Grun (Centralbl. für Nervenheilk., 148) and Lilienfeld (Centralbl. für des Med. Wissensch., 1888, 784) also report on the good

effect of the drug.

(b) Chloride of methyl spray.—Huchard (Le Progrès Médic., Jan. 28, 1888), referring to the fact that Lubinski had obtained good results in chorea from ether spray applied to the vertebral column, recommends the employment of chloride of methyl in the same manner. In a case of rhythmical hysterical chorea he got good results, and he also used it in a case of spinal irritation, and thought that Graves' disease might also be benefited.

10. Sciatica.

Dr. Gabriel Covarrábias, of Limache (Revista Medica de Chile, Dec., 1888), cured a case with antipyrin. The pain was very acute, and thought to be due to iliac abscess, as the temperature was raised, but there was a negative result to exploratory puncture. All ordinary treatment failed, but antipyrin in doses of seven and a half grains, with an equal quantity of quinine, thrice daily, cured the patient in ten days.

Ad

Dr. T. G. Parrot, of Aylesbury (Brit. Med. Journ., 1889. i., p. 70), gave antipyrin, 10 grains every three hours, to two patients, with almost immediate relief.

Flint (New York Med. Rec., Dec. 1, 1888) mentions a case of long-continued sciatica, in which packing with flowers of sulphur for thirty-six hours and nerve-stretching had failed. It was cured in forty-eight hours by antifebrin in large doses. On the first day 50 grains were given in four hours, and the patient was cyanotic and weak, but was relieved by whisky; on the second day 40 grains were given in two hours; on the third day the pain was gone.

Bouvard (Rev. de Thérap., April 15, 1889) used in his own case Cowden's method of enveloping the limb affected with sciatica in flowers of sulphur. After the first application the pain was made worse, but the third application removed the pain. There was a smell of sulphuretted hydrogen in the skin and urine, and ten days afterwards an acneiform eruption broke out on the face, which, however, disappeared in eight days.

11. Neuralgias and headaches.

Dana has used menthol in doses of 5 to 20 grains internally for various neuralgias and headaches. It gives a pleasant feeling of warmth, stimulates the heart, and raises the blood-pressure. He thinks it is better than antipyrin in weakly and ansemic individuals, as it causes no collapse. Saffrol $(C_{10}H_{10}O_2)$ was also found to have the same effect—It is a liquid stearoptene of oil of sassafras, and may be given in headache and sciatica in twentyminim doses.

The Wien. Klin. Wochenschrift of March 7, 1889, states that menthol may be given (four to fifteen minims) with success to relieve the pain in hemicrania, infra-orbital neuralgia, headache, rheumatism, and sciatica.

Dr. McLaury (Therap. Gazette) gives the following prescriptions: -- ... 3i.

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Ŗ.	Menthol			•••	•••	g g	3 j .	
	Sacchar, la	et.	• • •		• • •	g	r. 1X.	
lmin	ister in two	lve cap	sules.	Take	one or	two ca	psules d	ail y .
B	Menthol Antifebrin)		•••		а	а зј.	
	Sacchar, la	ct.					9.5.	
A	dminister i	n twent	ly-four	capsul	es. T	uke two	daily.	

Fiske (Bost. Med. and Surg. Journ.) has made some observations on antipyrin in the Adams Nervine Asylum. He found that headaches of a purely neuralgic character were relieved, but not those due to digestive disturbances; the disagreeable headaches and flushes during the catamenial periods were relieved. Pains of the joints and heart were also benefited, and it allowed sleep or even induced it. The dose does not require to be increased, and good results were obtained with only 4 to 5 grains every half-hour for three to five doses.

Dr. Hermann Müller read a paper at the Gesellschaft der Aerzte, at Zürich, in favour of the use of antipyrin in neuralgia,

especially if given by injection.

Goodhardt (Brit. Med. Journ., Jan. 19, 1889) relieved the lightning pains of locomotor ataxia by injections of pilocarpin when other means had failed.

Dunn (Therap. Gazette, August, 1888) used a hypodermic injection of 1½ grain of cocain for migraine, with complete relief in two minutes. In other cases he had a marked success with ½ to

3 grain.

E. Lloyd Jones (Practitioner, 1889, p. 337) gives an interesting paper on "The Diagnosis and Treatment of Headaches," accompanied by diminished or increased blood-pressure. He discovered accidentally that certain forms of headache, accompanied by low blood-pressure, are relieved by sipping water, but the pain returns immediately, but completely disappears in half an hour if about a tumbler of water has been taken. He explains these facts by the temporary raising of blood-pressure during the act of sipping, which is, however, more lowered when the sipping is finished, but much raised in about half an hour, from the increased volume of blood in the body. The opposite occurs in high-pressure head-aches. By using Von Basch's sphygmomanometer in 200 cases of headache he found that the majority of headaches with low pressure were so relieved, but the majority with high pressure were unrelieved, or made worse. He says that in the headache of anæmia there is often a lessened quantity of blood plasma in the body, and that iron may increase the headache, which is best relieved by stimulants, posture (lying down), and digitalis. In high-pressure headaches he keeps the bowels open, and gives small doses of amyl nitrite, or nitro-glycerine, and minim. The last he thinks very efficacious in high-pressure headache, occurring occasionally in anamic girls. In the recurrent high-pressure headaches of anamic women he gives alkalies and iron. In the uric acid diathesis he gives 20 grains of citrate of potash with 10 grains of salicylate of soda.

12. The phenacetins

Have been investigated by Dujardin-Beaumetz. Para-acetphenitidin $\left(C_6H_4 < \frac{OC_2H_5}{NHC_2H_3O}\right)$ not only lowers temperature but has also a powerful analgesic action, quite as powerful as antipyrin or acetanilid, but causing no rash, stomach pain, or cyanosis. It may be used in all forms of neuralgic pain. In hysteria it calms the excitability of the nervous system, and in nervous insomnia causes sleep better than the bromides. The meta-acetphenitidin has no therapeutic properties. The orthoacetphenitidin must be given in larger doses (20 to 30 grains per day) than the para-acetphenitidin (15 to 25 grains per day). Both are non-toxic, and cheaper than antipyrin. As they are insoluble, they should be given in cachets.

Mahnert (Deut. Med. Wochenschrift, No. 50, p. 10, 27, 1888) has found phenacetin to be most efficacious in trigeminal neuralgia, tabes, migraine, neurasthenic headache, and the excitement of Graves' disease.

13. Local anæsthetics.

- (a) Antipyrin.—Sée and others recommend subcutaneous injections of this drug for the relief of pain, and think it is better than morphia, as there are no unpleasant after-effects and no "craving." Berdach has used it in Prof. Bamberger's clinic in Vienna as a hypodermic injection, at the painful spot, of a 50-percent. solution in water, and has had nothing but favourable results. For a few seconds there is local pain and burning, and then analgesia for more than 1 cm. round the point of injection. The pains were relieved in a few seconds, and the relief lasted six hours. There is no depression, and if febrile, no lowering of temperature. He thinks it has a local effect on the nerve-endings of the skin; the reflex excitability is greatly diminished.
- (b) Hellebore in.—Venturini and Gasparini (Internat. klin. liundschau, April, 1888) found that in rabbits and dogs an instillation into the eye of a weak solution of helleborein (\frac{1}{70}\) grain per drop) causes anæsthesia of the cornea in 15 minutes, lasting half an hour. No action on the pupil or irritation occurred.
- (c) Strophanthus.—Steinach has shown that strophanthus seeds contain a body (not strophanthin) which when placed on the cornea produces in 25 to 30 minutes complete anæsthesia, lasting from two to twelve hours. There was slight irritation and hyperamia, or even cloudiness of the cornea.
- (d) Ethoxycaffrine. T. Ceols (La Terapia Moderna, No. 8, 1888) found that a subcutaneous injection of this drug caused a

local anæsthesia, but not to such a marked degree as caffeine,

though over a rather more extensive area.

(e) Methyl chloride spray .- Bardel (Gaz. hebdom. de Médecine et de Chirur., Nov. 23, 1888) proposes that before using this spray the surface should be painted with glycerine, as by this means there is less revulsive action, and less danger of sloughing.

14. Tetanus.

(a) Pilocarpin .- Dr. L. Casati, of Forli (Raccoglitore Medico), has published three cases of traumatic tetanus cured by hypodermic injections of pilocarpin hydrochlorate, when chloral and bromides had failed. Small quantities of a watery extract of opium were given every two hours, and & grain of pilocarpin injected every two hours night and day. In six days the tetanic contractions ceased, but violent delirium came on, probably from the affected muscles having been rubbed with belladonna ointment. This was checked by paraldehyde. In the second case only pilocarpin was used; and in the third case, a very severe one, 10 grains of pilocarpin were injected in 15 days, a cure resulting.

(b) Chloral. - Stavridis (Gaz. Médicale d'Orient) gives a case, with recovery, of traumatic tetanus treated with chloral, 22 grains being given every three hours in water continuously for 20 days; then 15 grains, and then 10 grains, recovery occurring on the

thirtieth day.

Dr. Thomas D. Saville (Lancet, 1888, ii., p. 1013) gives a case of traumatic tetanus treated by chloral. Twenty grains were given every four hours, occasionally with bromide of potassium, with an extra dose of 40 grains of the bromide at bedtime, if necessary. The spasms ceased on the twenty-fifth day of the disease, and the

patient recovered.

(c) Antifebrin. Flammarion (Bull. Génér. de Thérapeutique, Feb. 23, 1889) records a case of traumatic tetanus occurring in a boy of 11 twelve days after an injury to the hand. For three weeks the boy took 45 grains of chloral daily, as well as morphia, but the tetanus continued. He then had 3 to 5 grains of antifebrin every four bours, as well as the morphia, but without the chloral. He was at once relieved, and recovered in about ten days.

15. Massage.—New works:—
"Lectures on Massage and Electricity in the Treatment of Disease (Massoelectrotherapeutics)." Thomas Stretch Dowse Bristol: 1889. 398, pp. 8vo.

"Die Massage und Verwandte Heilmethoden." Dr. Preller.

Leipzig.

Dr. W. Hale White writes an interesting account of massage and

the Weir-Mitchell treatment in the Guy's Hospital Reports, 1888, p. 267. He uses the word "massage" to denote the method of causing the absorption of inflammatory and effete products, and the acceleration of blood and lymph currents by mechanical manipulation. It is best performed by him who remembers its object and his anatomy. He next mentions the well-known methods, and points out that the evidence that massage can aid absorption and circulation has been proved not only clinically but experimentally by various observers. Eccles has shown that while massage of the limbs increases the pulse rate, abdominal massage decreases it, and therefore it is better in general massage to do the abdomen first, in order that its depressing effects may be overcome by massage of the limbs. He then gives an epitome of the Weir-Mitchell treatment of isolation, rest in bed, overfeeding, and massage. If there is insanity in the case, it is not likely to do well; and a fat patient is not so favourable for treatment as a thin one. Faradisation he considers only an adjunct, and not an important one. The food need not be of a particular kind always, but should be as simple as possible, and given often. The nurse must be liked by the patient, be refined. kind, but firm. For the treatment of constipation, isolation, rest, and overfeeding are unnecessary. In the opium and chloral habits, massage and the Weir Mitchell treatment are also good.

16. Codeine as a substitute for morphine.

Dr. Fischer, of Kreuzlingen (Correspond. für Schweiz. Aerzte, October, 1888, 610), says he has for the last five years used codeine where morphine is indicated internally. The dose of three-eighths grain is equivalent to one-sixth grain of morphine. Externally, it may be used in the form of suppositories, of inhalations, salves, etc. He says that, if pure, its narcotic and anodyne actions are certain. It never causes bad secondary effects, even when given in one-half grain doses three or four times a day; it does not require to be gradually increased, and there is no craving for the drug. It is specially valuable in cough, and as a hypnotic in all cases of insomnia, except that depending upon extremely severe pain, where morphine only is of use.

17. Cocaine in morphinomania.

This has been recommended by many observers. Thus
Obersteiner (Wiener Med. Woch., No. 19, 1888) uses the drug when morphine has been entirely withheld, and the symptoms are at the highest pitch of severity (second day). He gives it in solution (not hypodermically) and frequently, not going beyond eight grains a day. By the third day he rapidly diminishes the

dose, and withholds it after about five days. He, of course, never gives the drug if any toxic symptoms thereby arise. (Brit. Med. Journ., 1888, ii., p. 1,450.)

18. Strychnine injections in some forms of paralysis.

Goodhardt (Brit. Med. Journ., 1889, i., p. 119) gives two cases of peripheral neuritis which had been treated by various remedies and by galvanism without success. He then ordered injections of strychnine to be given $\frac{1}{10}$ grain twice daily, and gradually increased to $\frac{1}{34}$ grain (in one case) twice daily. There was a marked improvement in motion and sensation in both cases within a month, although in one case the injections seemed to cause much pain in the ulnar nerve (the one principally affected). He thinks that the internal administration of strychnine may fail where the hypodermic injection may succeed. In a third case probably suffering from transverse myelitis of the lumbar region, there was no improvement with iodide of potassium and perchloride of mercury, but two-minim doses of liquor strychnine twice a day were given with marked improvement in walking and in the bladder symptoms.

19. Hypnotics.

During the past year no specially new hypnotics have been discovered, but certain of the more recent ones, especially sulphonal and hyoscine, have received a large amount of notice, and have been more or less praised as useful drugs.

(a). Sulphonal.—Müller (Thérap. Monatschrift, August, 1888) noticed sleep after 15 grains in cases of arterial sclerosis and

severe dyspnœa.

Salgo (Wien. Med. Woch., 1888, No. 20) says it is good in mental disease, especially in general paralysis of the insane, male hysteria and melancholia, the sleep lasting six to eight hours.

Rosin (Berl. klin. Wochen., June, 1888) uses thirty grains for a dose, which he says is equal to \(\frac{1}{7}\) to \(\frac{1}{4}\) grain of morphia, sleep occurring in \(\frac{1}{2}\) to 1\(\frac{1}{2}\) hour. He considers that sixty grains are more powerful than \(\frac{3}{4}\)ths of a grain of morphia or thirty grains

of chloral, but that it causes dizziness in the morning.

Schwalbe (Deuts. Med. Wochens., No. 25, 1888) has given it in fifty cases of various kinds, with much success in nervous insomnia, but not so much where there was cough or pain. He considers that it is not an analgesic, but acts on the cortex cerebri; that it has no influence on the circulation, respiration, or temperature; and is good therefore in cardiac and pulmonary affections, and also in children (3 to 7 grains). The after-effects may be giddiness, headache, weariness, sickness, vomiting, or diarrhosa.

Smith (Practitioner, Jan., 1889) gave it to a dog daily for seven weeks without disturbing the appetite or general health.

Conolly Norman (Dubl. Journ. Med. Sci., January, 1889) has used it in thirty-two cases of mental disease, chiefly melancholia or dementia, giving twenty to thirty grains as a hypnotic, eight grains as a calmative. He noticed no bad after-effects, and had no need to increase the dose.

Wetherill (Med. and Surgic. Rep., Dec. 13, 1888) gave it 230 times, successfully in 198, and thinks females are more affected with it than males.

Flint (New York Journ., Dec. 15, 1888) says it is useful in the insomnia of debility, neurasthenia, and mental prostration, sleep occurring in one hour and lasting six.

Kast (Therap. Monats., H. 7, 1888) says that the slow but long-continued action of the drug is due to its great insolubility, and gives it powdered with food, such as soup or tea.

Otto (Deut. Med. Wochens., Aug. 22, 1888) says it is good in mental cases, and one dose seems to act for many days. He has noticed as after-effects, giddiness, faintness, weariness, and staggering gait—all occurring the following morning; and with continued small doses, sickness, vomiting, and diarrhea. He says that not more than forty-five grains should be given daily.

Engelmann (Münch. Med. Wochens., 1888, No. 42) met with a diffuse scarlatinal eruption, appearing on the arms and chest, disappearing in three days.

Schotten (Therap. Monats., Dec., 1888) noticed also after giving sulphonal on three consecutive evenings fatigue, headache, and anorexia, lasting four days, and then followed by an eruption like measles.

Zerner (Wiener Med. Wochens., No. 45, 1888) has given 120 grains for a dose, with unpleasant after-effects, but none of them dangerous.

Perregoux likes the drug, but has seen some mental excitement and ataxic movements of the hands follow.

Lojacono (Riformo Medica, April 11, 1889) has used it with success in mental cases, and thinks it is a good general sedative. It prevented or mitigated acute maniacal or hysterical delirium and epileptic convulsive paroxysms. The effect was less marked in chronic insanity.

Mairet (Bull. Médic., March 27 and 31, 1889) says it only acts in 33 per cent. of insane cases with a dose of 30 grains, but in 73 per cent. with 45 grains; but it can be given only for two or three days in succession, as it causes vomiting, intellectual hebetude, and disturbances of motion. He

obviates these after-effects by gradually decreasing the dose day by day.

Verhoogen (La Clinique, April 11, 1889) prefers to give it per

rectum, suspended in water.

Dr. L. G. Bütchinskaia, a lady doctor of St. Petersburg (Vratch, No. 17, 1889, p. 406), says it produces sleep in one to two hours, lasting five to eleven hours. It causes—(1) increased frequency and strength of the pulse; (2) quickened breathing; (3) slight rise of temperature; (4) often nausea, vomiting, gastric pains, and diarrhæa; (5) an unsteady reeling gait, headache, or mental excitement.

It has also been reported on as useful by Mason (Brit. Med. Journ., 1888, p. 1278), Ruschewegh (Neurol. Centralbl., No. 21, 1888), Paschoud and Claret, Sachs (New York Med. Rec., p. 416, Oct. 6, 1888), and Kisch (Berl. klin. Wochens., No. 7, 1889).

It will thus be seen that the general consensus of opinion is in favour of sulphonal as a hypnotic, especially in cases of nervous insomnia and in mental cases, but not so much in insomnia due to pain, where undoubtedly opium in some form still continues to hold its own. The disadvantages of sulphonal are its slow action and the after-effects on the gastro-intestinal organs, the hebetude the following day, the slight ataxia, and the rash (in two cases). All of these, however, seem to be slight.

(b). Hyoscine.—Fischer (Gyōgyāszat) says that hydrochlorate of hyoscine is good for quietening the excitement of mania; but, as it is a marked depressant, it should only be used if other drugs

have failed.

Worrall (Australas. Med. Gaz., No. 84, p. 317) gave $\frac{1}{100}$ grain for pelvic pains in a woman. There was great collapse in ten minutes, but she recovered in ten hours by the administration of stimulants.

Krauss (Med. Chirurg. Centralbl., No. 40, 1888) gives it in mania and other kinds of excitement, such as the restlessness of general paralysis of the insane. The maniac collapses as if struck by lightning, but the general paralytic calms down gradually. He noticed no bad effects.

Konrad (Centrall). für Nervenheilk., No. 18, Sept. 15, 1888) says it is good in chronic insanity, with excitement and destructive tendencies, in doses of from $\frac{1}{120}$ to $\frac{1}{80}$ grain, but he deprecates its use in acute curable cases, unless all other means have failed, and says that it should never be used if there is also cardiac disease.

Drapes (Brit. Med. Journ., i., p. 942, 1889) has used it with much success in acute and chronic mania. (c). Ural.—Gustavo Poppi (Wien. Med. Wochens., No. 22, 1889) gives an account of a new hypnotic, which is a combination of chloral hydrate and urethane, and recommends it strongly. It is said to be rapid in action, and produces a long sleep. There are no disagreeable after-effects. Large doses cause a reduction of blood-pressure, and its use may be persisted in for several days together.

(d). Meco-narceine.—Laborde (Bull. de l'Acadam. de Méd., No. 19, 1889) reports that, in conjunction with Dr. Duquesnel, he has obtained a new alkaloid from opium, which he calls meco-narceine. It produces quiet sleep, only slight contraction of the pupil, slight anæsthesia, but no headache nor digestive disturbances.

(e). Hydropathy.—Brush (Practitioner, vol. i., p. 1, 1889) deprecates the production of sleep by drugs in many cases, and recommends tonics, good feeding, with much milk and eggs, and at night tepid baths, with Turkish towelling, galvanism to the spine, and hot liquid food after getting into bed.

DISEASES OF THE STOMACH, INTESTINES, LIVER, ETC.

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1. Dyspepsia.

Gastric Antacids. Sir William Roberts (Brit. Med. Journ., ii., 1889, p. 373) points out that for the relief of gastric acidity it is desirable not only that alkalies should be given, but also that a flow of saliva should be induced. The antacid lozenges at present in use do not fulfil these requirements perfectly. He therefore recommends a lozenge containing an antacid charge equal to 10 grains of carbonate of soda, together with 1 grain of chloride of sodium, the latter to act as a sialogogue. The lozenge should be sucked, not swallowed, and should be taken not sooner than three-quarters of an hour or an hour after breakfast, nor sooner than an hour or an hour and a half after dinner. It should not be used regularly, but only as gastric pain demands; and, again, its use should be discontinued if the pain is not thereby cut short. Used in this way, the author has seen it produce no illeffects at all. The Vichy lozenges are good, but too expensive for general use. It is pointed out that the admixture of lime-water with milk is often not sufficient to relieve the irritability of the stomach, for which it is prescribed. This is due to the feeble antacid powers of the lime. Six ounces of lime-water are only equal to 10 grains of bicarbonate of soda in regard to neutralising power; and when a solution of 5 to 10 grains per ounce of bicarbonate of soda is added to the milk, a favourable result is at

[Lime-water is commonly added to milk in very insufficient

quantity. Not less than one-third of lime-water should be employed, and, in some cases, half as much may be advantageously added.—D. D.]

Hydrotherapeutics. - Kevin (Dublin Journ. of Med. Sci., vol. lxxxvii., p. 480), reviewing the causes of dyspepsia, shows that it is mainly a disease of town life, and due greatly to the worry of business, etc., together with improperly-cooked food, tea-drinking, and other errors of diet. In regard to treatment, drugs ought never to take the first place. Dr. Kevin points out a common error of physicians in forbidding patients to eat certain injurious foods, the action of which they have probably discovered for themselves, but omitting to regulate the diet which ought to be taken. In hydropathic establishments the regulation of diet and exercise, and the freedom from business cares, plays an important part in effecting a cure. Dr. Kevin had also treated cases of painful dyspensia with the so-called "hot pad" and "binder." and found that they relieved flatulence, pain, constipation, and distension, cleaned the tongue, and remedied insomnia. The pad is made of four-ply of swansdown, about 12 inches by 6 inches. This is put into boiling water, wrung out and put over the abdomen at bedtime, covered with a bandage two yards long, half swansdown, and the other half macintosh cloth. Round the whole is placed a flannel binder 1½ yard long. In the morning the abdomen is sponged with cold water, rubbed with a rough towel, and the flannel binder then worn throughout the day. Blisters to the epigastrium are also very useful for the relief of pain. The author has found that adults soon tire of peptonised food, but with children it works great effects.

General treatment.—Van Valsah (New York Med. Rec., March, 1889) insists upon the following points in the treatment of dyspepsia:—

1st. The nervous system should be quieted, and the patient

rendered as hopeful as possible.

2nd. A careful diagnosis should be made as to the actual cause of the dyspepsia.

3rd. Overwork should be avoided, and the patient placed in the best hygienic circumstances.

4th. A glassful of hot water (temp. 110° to 120°) should be sipped an hour or so after each meal.

5th. The diet must be such as undergoes fermentation as little as possible. Beef pulp made into cakes about half an inch thick, and broiled before the fire till the outside is brown, is specially recommended. Four to six ounces a day should be given at first, and gradually increased. Game, chops, or steaks, in

small quantities, may be allowed as occasional alternatives. The appetite should be stimulated by bitters, and digestion assisted by pepsin, bismuth, ginger, or ipecacuanha. Salicin was found very

useful when fermentation and acidity existed.

[The remark of a writer mentioned above, that drugs should not take the first place in the treatment of dyspepsia, is a very necessary one. The principle is, of course, generally recognised, but the practice is often forgotten. The advice frequently given to a patient is to abstain from various articles of diet, but he is not told what to eat, and at last is left, as Dr. Kevin puts it, with nothing but tea and toast, and then the tea is forbidden. A

dietary should, in all cases, be prescribed.

I would insist upon the value of alcohol in dyspepsia. (See also the experiments of Kurschinsky on the pancreatic juice mentioned below.) It requires care in its use; not that there is much danger of producing habits of intemperance when it is given with food and in prescribed quantity, but the form in which it is administered must be suited to each patient. Malt liquors are nearly always inadmissible; the fashionable whisky well diluted suits most cases for a time, but is apt to pall on the palate and become nauseous; ordinary claret is, as a rule, not sufficiently stimulating. Burgundy is very generally useful, especially in atonic dyspepsia. Sometimes patients complain of it being too heating, especially in summer, and occasionally of its producing acidity. For such cases I would recommend a white Bordeaux wine mixed with Vichy water, or, still better, the slightly effervescent St. Galmier water. The latter is at present, however, somewhat difficult to procure in England .- R. M.]

[In respect of so-called "claret," there is great difficulty in procuring genuine Medoc wine at a moderate price. The mixed and factitious stuff called claret is commonly very unwholesome. Sound Bordeaux wine (grown in the Medoc district), kept for at least three years in bottle, is perhaps the most wholesome drink of the kind. A third part of water may be added in summer with advantage. Spanish, Italian, Hungarian, Greek, Algerian, and even Australian red wines are often sold as "claret," and are mostly unsuitable for dyspeptics.—D. D.]

Condurango.—The pretension of the cure of cancer of the stomach by condurango bark was, of course, found to be without any real basis. Nevertheless, the drug has appeared to do good in certain stomach affections, and Tchelzew (Bull. Gén. de Thérap., 1888, p. 38) has investigated its physiological action upon the stomach secretions. Dogs, in whom gastric fistule had been produced, were used for the purpose of experiment, and the

to to make the amountment in the firm of a figuration of 15 grande of the text of his grandes of wine symmet u.S. grandes. The tale will result was brouned.—

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Treet Such Vom. 1 15 Tiret Gentlan. 13. 5j. ... Tast Alies Calendonia, gutt. ... xx.—xl. M. ...

3. When there is painful dyspensia with dilatation of the Monny h.

14 Aq Chloroformi ... 150 parts. Aq Flor. Amant. อบ ,, 100 " М. Arjum .. ,,,

Our descriptionful to be taken at intervals of fifteen minutes until the pain ceases

Aq Chloroforms
Timet Anna 111, 15 150 parts. .. 145 ,, Agnar M.

taken in the same way.

The following formula is recommended (Therap. Gaz., Sept. 10, 1888) for general use in dyspepsis: ---

B	Ammonii Carb.				- 111	388.—3j.
	Magnes, Sulphat,		212			3iij3vj.
	Tinct. Belladon.	444	444		×44	3j.
	Tinet. Nucis Vom.		444	6161		31
	Tinet Zinzib				-60	3ij.
	Spt. Ætheris Chlorici			444	46.0	3ij.
	Aq. Menth. Pip. ad		***			Tvi.
	M. capiat reger	oris.	-			

And for the flatulent colic so common in women the following:-

R	Spt. Ammon. Co. Liq. Ammon. Acetat.	nic.	***	aa	ziij.
	Ether, Chloric,	100	920		311.
	Tinet. Zinzib				39.
	Tinct, Belladon		1000		31-
	Aq. Menth. Pip. ad				āvj.
	₹i. omni quadranti	hora, vel	pro re	pata.	-

Hydrochloric acid in the dyspepsia of nephritis.—Girard and Demieville (Brit. Med. Journ., June 22, 1889) quote cases of dyspeptics suffering from Bright's disease whose renal symptoms have been aggravated by the use of dilute muriatic acid. Professor Bourget, of Geneva, however, relates a case of attempted suicide by strong hydrochloric acid, in which not only were the chlorides of the urine not increased during life, but in which ultimately, after death from pyloric stenosis, the kidneys were found to be quite healthy. He concludes, therefore, that, à fortiori, medicinal doses cannot cause lesions in the kidney.

Tuberculous dyspepsia.—Klemperer (Berl. klin. Wochenschr., No. 11, 1889) finds that in the dyspepsia which is so common in tuberculous patients hydrochloric acid should be given only in the later stages. Alcohol and bitters are the best means of producing stimulation of the muscular coat of the stomach, which is specially desirable. Creasote after meals is good, and is best

given as Frantzel's wine, consisting of :-

Creasots		181	110	444	13.5 parts.
Tinct. Gentiana	115	11.1		-1-	20.0
Spt. Vini Rect.	70.00	494.		79.5	200.0 ,,
Vini Xerici	112	111	111	111	800.0 "

A dessertspoonful several times a day.

Neurotic dyspepsia. — Peyer (Corresp. Blatt für Schweitz. Aerzte, Oct. 15, 1888; and Med. Chron., ix., p. 401) gives an account of the different conditions in which an abnormal sense of hunger (bulimia) may appear. He gives a most interesting account of a case of acute bulimia which came under his own notice. A lady, aged thirty-two, who had been subjected to

much nervous worry and trouble, was suddenly seized with a crampy and miserable feeling in the stomach, which increased and became a painful sensation of hunger. She drank hastily three pints of milk, but still the sensation increased in intensity. She became apparently so ill that it was feared her end was near. She was forced to groan and lament loudly, and cried out, "Give me to eat, else I shall die." In three-quarters of an hour she had swallowed three pints of milk, twenty-three eggs, and two pints of wine. She gradually became quieter, and lay exhausted and half sleeping on the bed. But on the following morning the patient was quite well, and had not the slightest digestive trouble after her enormous meal. She described also that during the attack she did not feel as if the food taken had entered the stomach at all, but the wine, to which she was unaccustomed. alone alleviated the uneasy sensation. No return of the attack. in any form, had been noticed after a lapse of three years.

Chronic cases of bulimia are much commoner, but present a somewhat different association of symptoms. There is a feeling of satisfaction after eating, but the sensation of hunger soon returns, and causes great distress if not alleviated by food. Cases of this form are also related by the author. And with this condition, even though enormous quantities of food are taken, the patient may still waste. One very interesting case of this kind is detailed. The patient was a woman, aged thirty-six years, of a selfish character. In the summer her disposition seemed to change, and she became more amiable. Soon she became anxious. and her memory weak. Then the appetite increased enormously, and she was obliged to take considerable quantities of food every Yet she wasted continuously. At the end of the two hours. summer, however, the bulimia gradually disappeared, her bodily health improved, her mental powers returned, but with them also her former selfish disposition and otherwise disagreeable temper. Another case is reported as an example of how this painful feeling of hunger is sometimes present day and night, and cannot be assuaged by food. The causes of the condition, as given by the author, are: -(1) Lasting grief or care; (2) exhausting conditions of the whole body and nervous system after long and severe disease; (3) general hereditary neurasthenia; (4) hysteria; (5) and sometimes no cause other than neurosis of the stomach.

The treatment must, as far as possible, be applied to the removal of these causes. Strengthening measures—wine and tonics, valerian, iron, bromide of soda, arsenic, and bismuth—are recommended. Dr. Guipon speaks highly of the long-continued use of scraped raw flesh.

[The abnormal sense of hunger, a true neurosis of the stomach, is occasionally met with as a sequel to an attack of acute gastric catarrh, just as atonic dyspepsia may follow the same condition. I can confirm the observation of the author given above, that the gnawing pain complained of at the pit of the stomach is not always relieved by food, and care is sometimes necessary to prevent this leading to an error of diagnosis. A weakness of general health nearly always co-exists, and requires attention in treatment.—R. M.]

Bilious attacks in neurotic subjects.—Angel Money (Lancet, June 15, 1889) says that the bilious attacks of neurotic subjects are very different paroxysms from those seen in habitual or occasional overfeeders. The correct treatment is—a tablespoonful of wine at once, and a teaspoonful of the syrup of the hypophosphites three

times a day for a week.

Influence of drugs, etc., on the secretion of pancreatic juice.—
Preceding experiments on the influence of drugs upon the digestive secretions have almost entirely been confined to the gastric juice and the bile, principally because of the ease with which a gastric or biliary fistula can be established. Dr. Kurshinsky, of St. Petersburg (Inaug. Dissert., and Med. Chron., ix., p. 496), has established a pancreatic fistula in healthy dogs, and has investigated the flow of the secretion under various physiological and pathological conditions. The first part of the paper does not concern us here. In the second part Dr. Kurshinsky treats of the results he obtained by the action of alcohol, morphine, and cocaine.

The action of alcohol was as follows :-

(1). The pancreatic secretion was markedly increased from half an hour after the digestion of the alcohol for about one and

a half hour, then gradually disappearing.

(2). The juice excreted under these conditions had a high digestive power, digesting fibrin in twenty minutes, although it had a relatively low specific gravity, and a low proportion of solids. It may be noted that after taking food the solids of the pancreatic juice are increased.

(3). Thus the use of alcohol would appear to be justifiable physiologically when given with food, and in cases of ansemia, debility, convalescence, etc. The alcohol in these experiments

was given by the mouth on an empty stomach.

Morphia was given by the mouth, and also subcutaneously :-

(1). It inhibited or entirely abolished the pancreatic secretion, and also prevented the increase which normally takes place after a meal, while the salivary secretion was inhibited at the same time. (2). The effect of the drug was proportional to the amount employed.

Cocaine was given hypodermically, and produced the following

results:---

- (1). It inhibited the secretion, like morphia, but was somewhat uncertain in its effects.
- (2). The effects were, generally speaking, in correspondence with the doses administered, but they lasted for a shorter period than in the case of morphine.

[The pancreatic juice plays a very great part in the digestion of proteids, and it is very desirable that we should know more about its condition in diseased states. It is certain that many cases of dyspepsia are not due to gastric disorder, and it should be remembered in our treatment that the gastric juice is not the only secretion which digests proteids. This will possibly explain some of the discrepancies which exist between the opinions of pharmacologists and the observations of practical physicians.—R. M.]

2. Dilatation of stomach.

Baraduc (Journal de Méd.; and Practitioner, Dec., 1888, p. 455) asserts that direct electrical treatment can be applied to a dilated stomach with success, but only in those cases which are functional and due to atony of the solar plexus. In such cases he applies direct faradisation to the stomach in the following manner: -An electrode of terracotta is laid on the epigastrium, and another of copper is introduced into the stomach through the tube of the stomach-pump, but by being kept some two inches above the end of the tube is not allowed to come into contact with the gastric mucous membrane. The stomach is filled with some mineral water, and the tube introduced. The current is now allowed to pass gently and is gradually increased, when contraction of the stomach will be perceived. Each sitting should last for five or ten minutes. The stomach should have as much rest as possible. and the epigastric region should be rubbed with camphorated oil. The diet should be spare and nitrogenous, and only a little milk allowed as fluid. The improvements claimed are:—(1), Disappearance of the aching pain in the back and epigastrium; (2), contraction of the stomach; (3), diminution of thirst, and increase in the quantity of urine.

3. Gastric ulcer.

Gerhardt (Deutsche Med. Woch., 1888, No. 18; and Centralbl. f. Med. Wissensch., 1889, p. 750) gives little encouragement for the use of drugs in cases of gastric ulcer. Narcotics, he says, should be used only in cases of need; hydrochloric and other acids

only in old ulcers, where the gastric juice is deficient in acids. Alkalies, too, he does not generally recommend. Nitrate of silver he has found to be of service, in that it prevents the excretion of a too acid gastric juice, and so diminishes the pain. Condurango (see "Year-Book," 1889, p. 60) and washing out the stomach are beneficial in old ulcers, while in recent ones a treatment at Carlsbad may be recommended.

Milk diet is most important, and may alone effect a cure. Peptones also may be given; and if there be vomiting, may be administered in the form of enema. An easily-digested diet of flesh, milk and eggs, with a little carbo-hydrate food, may after-

wards be given.

Cornils (Deutsche Med. Wochens., 1888, No. 37; and Centralbi, f. Med Wissensch., 1889, p. 255) shows that it is all-important to let as little residue of food as possible remain in the stomach, and this is best effected by the use of purgatives, especially Hunyadi water. The meals should be separated from each other by as long an interval as possible, so as to give the stomach rest; and milk is the best food.

Pepper (Journ. of Amer. Med. Assoc., May 25, 1889, p. 725) concludes a lecture upon Duodenal and Gastric Ulcer by the following remarks on treatment:—The most important elements of treatment are—strict rest, rigidly-regulated feeding, full courses of nitrate of silver alternating with oxalate of cerium, together with bismuth or copper. Careful attention to co-existent gastric catarrh by diet, mild mineral waters, or by washing out the stomach, may be demanded. Hypodermic medication and rectal alimentation are very beneficial in this disease.

4. Hæmatemesis.

Flasher (Algem. Med. Centr. Zeitung, No. 55, 1888) recommends hot water as a most useful remedy for vomiting of blood. It should be taken as hot as it can be borne. It soon causes coagulation of the blood.

5. Ascites.

Electricity.—Muret (Revue de Médecine, Sept., 1888; and Practitioner, Dec., 1888, p. 449), as the result of his own observations in Kussmaul's clinique, and of a consideration of the history of the treatment, strongly recommends a trial of electricity in cases of ascites. Solfanelli, in 1866, thought that it caused the rapid disappearance of ascites in a case of atrophic cirrhosis of the liver. Glax, in 1878, found that in chronic albuminuria with ascites and ordema, faradisation of the abdominal walls caused rapid increase of the diuresis and concomitant diminution of the ascites. In cases of chronic peritonitis some writers reported no

improvement. Muret reports two cases under Kussmaul. In the first the patient, a female, aged seventeen, had chronic tuberculous peritonitis with much ascites and scanty flow of urine. nutrition was poor; and treatment with iron, arsenic, and nourishing diet, had improved her general health somewhat without diminishing the ascites or increasing the quantity of urine passed. For six weeks the interrupted current was applied daily to the walls of the abdomen, and immediately after its first application the diuresis considerably increased. A gradual diminution of the ascites occurred, and Muret had no doubt that the faradisation was one of the several improving agencies. The second case, a widow, aged fifty-four, had a splenic tumour of uncertain nature, slight enlargement of liver, and much ascites. She had been tapped four times in the three months preceding her admission under Dr. Kussmaul's care. The urine was scanty. Potash salts, caffeine, and blatta orientalis, were without much effect upon the urine, and did not prevent the increase of the ascites. The medicines were continued, but in addition faradisation of the abdominal walls was used, and for the day after its first use the amount of urine increased to 40 ounces, whereas formerly its daily average was only 12 ounces. The abdominal tension was also much relieved. Faradisation was continued, but the amount of urine diminished on the next two days to 20 and 15 ounces, and the patient was tapped for the sixth time. The abdomen became tense again, faradisation was used twice a day, and the urine increased rapidly in amount, rising to 100 ounces per day after five days, and the ascites was much relieved. For another fortnight the quantity passed averaged 50 ounces, but the influence of the faradisation was then lost, and the patient died eight months later, after having been tapped every fortnight. The result of the faradisation had been transitory, but very remarkable. The reasons which have so far been given for the effects of the electricity are-(1), that it increases the absorbent powers of the lymphatics (Erb); (2), that it strengthens muscular pressure, and so increases absorption (Glax); and (3), a later opinion of Erb, that it induces a catalytic action in the ascitic fluid.

Rauffmann (Berlin. klin. Wochenschr., No. 31, 1889; and Pract., October, 1889, p. 298) also recommends the treatment of ascites by faradisation, and especially when it is due to portal obstruction. It is less useful when the ascites is a part of a general ædema, and the effect is much increased when the treatment is begun by tapping. The patient is to be placed on his back with the pelvis raised, and the abdominal muscles are faradised in turn, the

electrodes being placed on the motor points of the muscles. For the recti muscles one electrode is placed above the symphysis pubis, the other just below the ensiform cartilage; for the oblique muscles one electrode underneath the costal margin in the mammillary line, the other upwards and forwards from the anterior superior spine; for the transversalis, the electrodes are placed on the twelfth rib and the iliac crest; and at the end of the sitting, which lasts ten to fifteen minutes, and is carried out once or perhaps twice daily, one electrode is placed on the sternum and the other on different sets of muscles, so as to produce repeated contractions.

Iodine. - Rivadeneyra (Lancet, 1888; and Med. Chron., vol. ix., p. 255) speaks highly of the success of iodine applications in ascites from malarial poisoning not due to lesions of the heart, kidneys, or liver. He applies the tincture to the surface of the abdomen in strips or fringes, leaving a breadth of clear skin between each. The painted skin soon becomes irritated, and peels; but the iodine can now be applied to the unpainted portions. Where the ascites is very considerable, paracentesis is first performed, and the iodine

applications are commenced a few hours afterwards.

Calomel and Digitalis. Schwass (Berl. klin. Wochenschr., No. 38, 1888) in Senator's clinique has seen prescribed for the ascites of liver cirrhosis a grain and a half of calomel, and threequarters of a grain of digitalis, every three hours for a week. By combining the digitalis with the calomel, the latter, it is claimed, is borne better, and does not so easily produce ptyalism, stomatitis, or gastro-intestinal catarrh. The author claims great advantages for this treatment; but it is to be noted that in the case reported the treatment was combined with paracentesis.

The Therapeutic Gazette (Nov. 15, 1888), remarking upon the above report, adds that Rosenheim used calomel in cirrhosis of the liver without success. Leyden was somewhat better pleased with it; whilst Meyjes has reported two cases in which it pro-

duced an apparently perfect cure.

[The measures recommended above can at best be considered only adjuvants to paracentesis. Reference may be made here to the remarks in the "Year-Book" for 1889, p. 71. The strain of removing such large quantities of fluid as accumulate in the abdomen in ascites should not be thrown on the already disabled kidneys .- R. M.]

6. Cirrhosis of liver. Semmola (Internat. klin. Rundschau, 1889, Nos. 1 and 2) has treated cirrhosis of the liver, before it has reached the contracting stage, by an absolute milk diet. He gave every three hours from 3 to 6 ounces, increasing the amount until as much as 6 pints a day were administered. All alcohol was, of course, forbidden. Semmola claims that by this means an absolute cure was sometimes effected.

[With respect to these "cures," it is much to be desired that reporters would consider it their duty to place on record the progress and issues of such cases in equally accessible communications. No "cure" of a case of ascites, depending on cirrhosis of the liver, could be considered absolute unless the patient had recovered and maintained health for at least three years subsequently. It is to be borne in mind, too, that cirrhosis of the liver is not always fatally progressive, and may be both "quiet," and capable of arrest.—D. D.]

7. Gall-stones.

Olive oil.—In the last issue of the "Year-Book" (p. 69) an account was given of the treatment of gall-stones by large doses of olive oil. The method has been investigated by Professor Chauffard, of Paris (Practitioner, Feb., 1889, p. 136), who shows that the administration of olive oil undoubtedly brings away, after seven or eight hours, a large number of concretions, but that these are not gall-stones. They are composed of neutral fats and free fatty acids, with but a small proportion of cholesterin. The treatment probably causes discharge of certain products with relief to the patients, but it does not soften the calculi, although a few may come away with the soft matters, as with any purgative

Zerner (Wien. Med. Wochenschr., 1888; and Clbtt. für Med. Wissensch., 1889, p. 207) attempts to show that the action of the diaphragm and of the muscular tissue of the gall-bladder is all-important for the due movement of the bile along the biliary channels. In obese persons, or those of sedentary habits, these muscles become weak in their action, and consequently there is stagnation of bile. Changes of the portal circulation in the obese produce some alteration in the pressure under which the bile is secreted, and so assist its stagnation. The writer recommends the olive oil treatment, but he has also effectually used antipyrin, for the relief of pain.

8. Jaundice.

Pilocarpin. -- Dr. Witkowski (Lancet, June 8, 1889) speaks highly of the employment of injections of $\frac{1}{8}$ grain of pilocarpin twice daily in jaundice. He claims to have treated thirty cases of jaundice in this manner with satisfactory results.

[Alleged results such as the above are so vague as to be practically worthless, and recommendations of any drug for the treatment of a symptom depending on so many possible causes

can hardly receive serious attention unless a full diagnosis of the cases has been established.—D. D.]

For the itching of jaundice Dr. Goodhart has found the injec-

tion of pilocarpin in # grain dose of great service.

[Alkaline baths and plentiful soaping are also of use to allay this itching.—R. M.]

9. Acute yellow atrophy of liver.

Barr (Medical News, May 18, 1889) treated a case of this disease with five minims of acid. nitro-hydrochlor. dil. every three hours. Nausea and vomiting, which occurred during the course of the malady, were relieved by the following formula:—

R	Bismuth Subnitrat.					3ij.
	Acid. Carbolic					gr. iv.
	Aq. Menth. Pip	34.2	-0.00			3vj.
	Aquam ad					Biij.
	One teaspoon	ful in w	cter eve	EV two	hours.	000

Retention of urine and constipation also occurred as complications, the former yielding to bicarbonate of soda and liquid extract of henbane, and the latter to an enema of soap and water, with a little glycerine. The patient recovered.

10. Intestinal obstruction.

In a discussion upon this subject at the Wiesbaden Congress of 1889 Curschmann (see Med. Chron., Oct., 1889, p. 39) considered that much more might be done without operative procedure than the surgeons are inclined to admit. For the thirst, small pieces of ice flavoured with brandy may be sucked; and sometimes subcutaneous injections of salt solution he had seen do good. The objects of treatment which he laid down were:—

(1). To mitigate the peristaltic actions above the point of

obstruction.

(2). To lessen the over-filling and tension of the bowel.

(3). In certain cases, to apply known mechanical rules to remove the obstacle.

(4). By carefully using means to cause peristalsis of the bowel beneath the obstruction, and perhaps effect the removal of the

obstruction itself.

Purging should never be continued after once incarceration of bowel is diagnosed. Opium should be used boldly from the commencement. Washing out the stomach by Kussmaul's method he believes to have an excellent effect; and the bowel may also be punctured by an injection syringe with good results. He has never seen bad results from the latter treatment. Frequent injections of fluid into the rectum he does not approve of, and thinks the injection of air much better. When early and clear diagnosis can be made of the cause of the obstruction, operation is advisable, but Curschmann thinks that this should be done with more care than has hitherto been the case. A small incision only should be made in the linea alba, or as near as possible to the expected site of the obstruction, the lesion quickly searched for without hauling out the intestines, and, if this is unsuccessful, then an artificial anus should be made by stitching the nearest distended coil of intestine to the abdominal wall

Goltdammer (Berl. klin. Wochenschr., No. 10, 1889) recommends the exhibition of opium in large doses. The opium must be pushed until myosis or, less frequently, even sleep is produced; if rejected, morphine should be given hypodermically. Injections of water, or inflation with air, should next be tried. For the release of the upper intestinal segment the stomach-pump and puncture of the distended gut should be employed. Rigorous diet is absolutely necessary; only small lumps of ice should be swallowed. and nutrient enemata administered. When complete rest of the howel has been induced, three or four litres of water should be injected with moderate force once, or even twice, a day. Curschmann, Goltdammer believes that it is premature to look upon operation as the only remedy. Rejecting cases in which ileus is the result of a hernia, preliminary laparotomy should only be undertaken, (1) in cases in which intussusception is recognised, and (2), in cases in which opium treatment does not remove the symptoms of acute obstruction; in these cases operation should be promptly performed. It should further be undertaken in cases in which, after subsidence of all symptoms under opium, acute symptoms set in anew.

Marmaduke Shield (Brit. Med. Journ., March 30, 1889) points out that with the exception of certain cases of invagination, diagnosis of the exact condition is impossible. Three conditions closely simulate intestinal obstruction, namely, acute peritonitis, acute enteritis, and rotation of an ovarian tumour on its pedicle. The importance of carefully searching for external abdominal herniae cannot be exaggerated. Copious enemata are the first aids to diagnosis and treatment. The materials used should be oil and milk with the addition of a little asafætida if much dlatus exist. If enemata fail to remove the symptoms of acute obstruction, manipulation of the belly, with inversion of the patient, and galvanism of the abdominal walls, may relieve. These measures failing, abdominal section gives the patient a chance, there being no pathological condition causing acute obstruction of the small bowel which cannot be relieved by this means.

There is no great danger in opening the peritoneal cavity, provided that strict cleanliness be observed; but for the operation

to be successful, it must be undertaken in good time.

Nothnagel (Wiener Med. Blätter, 12 and 13, 1889) has investigated the question of intestinal obstruction by means not only of clinical observations but of physiological experiments upon rabbits. He shows, amongst other things, that when the contents of a constricted bowel enter it by the stomach, no backward peristaltic movements occur; but when irritating fluids are injected into the rectum, an anti-peristalsis of the bowel is set up, which carries the fluid upwards, even as far as the ileo-cæcal valve. Lukewarm water has no such effect, but ice-cold water and carbonic acid water ascend farther than the injection syringe can force them. In one case under Nothnagel's care, a ten-per-cent. solution of common salt was shown to have ascended above the ileo-caecal valve when injected into the rectum. Again, whereas ordinary peristalsis from above may make an invagination worse, an antiperistaltic action may set it free. Nothnagel believes that no harm can be done by enemata if administered within some hours after the onset of symptoms. No food or fluid should be given by the mouth, because it is distension of the bowel which expecially causes peristalsis. To allay peristaltic action Nothnagel gives opium freely, administering hourly doses amounting to from four to even fifteen grains in the twenty-four hours. It should be given in solid form or as the tincture, unless there should be vomiting, when morphia should be injected subcutaneously. No purgative whatever should be given unless the obstruction is caused by impacted fæces. Massage also does harm.

Puncture of the intestine. Rosenbach (Berlin, klin. Wochenschr., No. 17, 1889; and Practitioner, July, 1889, p. 45) has applied puncture of the intestine to the treatment of obstruction in four cases without any bad results. In the first case puncture gave vent to offensive gas, and in a week all urgent symptoms subsided. A year later the patient was again greatly relieved by the same treatment under similar conditions. In the second case the patient was pregnant, and was afterwards confined of triplets. Constipation, vomiting, and meteorism were present, and were relieved from time to time by puncture. The third case was one of malignant disease of the cocum; and the fourth, one of perityphlitis. Rosenbach used a cannula two inches long, and punctured in the upper half of the abdomen, at the most prominent spot in the median line. The instrument was inserted slowly, and after its withdrawal opium or morphine was given

to quiet peristalsis.

Substitute.—The Lancet June 36, 1889, in reporting a successful mass of impassive option treated by inflation, and under the cure of the Chandle, remarks that the success of inflation in ministration in highly upon its early employment. However, it is most useful for the operation. Too great cure maintain a symmet is most useful for the operation. Too great cure maintain to taken: trials should not be too prolonged nor window it greatest trials should not be too prolonged nor window it greatest. Four successful cases have been reported in the Lancet since October, 1886.

Learning -Lama in a communication made to the Academie de Mederine Boll. Sex de Thirm, 1886, p. 5221, discussed the and handle of electricity to the cure of intestinal obstruction. The farable current accord to the abilionen produces forcible or normalization of the surnated muscles, but has no effect whatever on the themped filtes, and in particular none upon those of the intestines if these be paralyzed, as is the rule in intestinal observation. The galvanic current, on the other hand, when interrupted causes energetic peristaltic contractions, especially if the current has been allowed to pass for some little time before interruption. A current of existderable intensity is necessary; had here a difficulty arises. One pole must be placed in the rectain in contact with the mucous membrane, and if the electrole he of metal a current of even 12 to 15 milliampères will cause shoughing of the mucous membrane. This difficulty is removed by the procedure of M. Boudet, of Paris, who injects a quantity of salt water into the rectum by an ordinary "irrigateur," the canatchone nozzle of which is in connection with the battery. Thus the salt water becomes the electrode, and a current of 35 to 40 millioniperes can then be allowed to pass for five minutes without may ill effect. The current must then be reversed, and is interrupted about every 20 seconds, as long as the patient can found states that as soon as the current is reversed. desire for defecution is felt by the patient, and this soon becomes uncontrollable. If the sound be now withdrawn, a relief to the idetraction may follow; but four or five applications of the current may be necessary. The author states that since purgatimes are useless when the intestine is occluded, and even harmtal, elect they cause vointing; since, also, the diagnosis of the common of the electron tion is nearly always very obscure, the applieation of paleautom in the manner described should be made as mone. Also, no time should be lost in applying the electricity, close, cloudd it tall, surgical measures may be employed with wome chance of effection. In 16 cases treated in this way Larat had obtained a citie in 10 instances.

11. Peritonitis.

Meigs (Medical News of Philadelphia, Dec., 1888, p. 641), in discussing the treatment of peritonitis, maintains that neither opium nor salines should be used exclusively in such cases. Each method of treatment may have its own rôle to play at the proper time. In the early stages of peritonitis it may be well to give saline purgatives, but patients rarely come at this time under the notice of the physician. At a later period salines will only do harm. At the same time Dr. Meigs gives a warning against the indiscriminate use of opium in such cases. It is especially desirable not to narcotise the patient, and it should not be expected that the pain of a severe case of peritonitis will be entirely abolished. The treatment recommended by Dr. Meigs is the following :- If physical obstruction can be diagnosed, operation should at once be recommended. In other cases, and those where operation may subsequently become necessary, there should be prescribed liquid diet in small quantities every two hours, and every two hours a quarter of a grain of opium, and one-twelfth of a grain of extract of belladonna. To this may be added, if it should seem advisable on account of pain, the administration twice, or at the outside four times, in the twenty-four hours, of a one-grain opium suppository. At the same time injections of warm water, with or without soap, should be given once to three or four times daily. If flatus is passed, the case continues to be a very hopeful one. This course should be rigidly adhered to for from twenty-four hours to five days, or possibly longer, when the time will have arrived at which it becomes necessary to consider the propriety of using some sort of aperient.

Purgatives, Dr. Meigs says, are required in peritonitis—first, to increase peristalsis and overcome obstruction; second, to deplete the intestinal vessels by drawing away watery motions. In the early stages of peritonitis after operations, as seen by the surgeons, saline purgatives may abort the inflammation, but later on they will do harm by stirring up more inflammation. But when the patient has been quieted by the measures already enumerated, the time comes—only to be rightly decided by a competent physician—when a purgative should be administered. Dr. Meigs, however, considers that salines are not desirable at this stage, but rather vegetable laxatives, of which he recommends the

following combination :-

| B. Ext. Belladonnæ | gr. | g

This should be given once or twice in the twenty-four hours, and stopped if violent pain should be evoked. Should this occur, which is seldom the case, the opium and belladonna should again be administered, and the laxative pill tried again in a day or two. The pill may soon be given every four hours, and will then readily overcome any obstruction there may be to the action of the bowels.

Baldy (Medical News, Dec., 1888, p. 642), on the other hand, says that opium should not be used in any form. He believes that it can only do good by relieving pain, and often cannot do this. It favours the formation of intestinal adhesions, paralyses excretion from the peritoneum, and so helps to continue the inflammation; it causes tympanitis, and consequently sometimes cardiac paralysis, and lures the attendant into a false sense of security. Saline purgatives, on the other hand, Dr. Baldy maintains, act in all these respects in the opposite manner to opium, and even relieve pain more than does the latter drug. The conclusions which the writer comes to at the end of his paper are the following:—

The cause of the peritonitis should first be determined; and
if this be organic, operation with irrigation and drainage is the

only proper method of procedure.

2. If the disorder is of functional origin, purgatives and enemata are indicated; but if these fail, surgical methods should soon be adopted.

3. If the case is doubtful, purgatives should be tried first; but

the surgeon should be ready to operate at a moment's notice.

12. Diarrhæa of the tuberculous.

Potain (*U Union Médicale*, No. 42, 1889), after discussing the causes of the diarrhea of the tuberculous, shows that medicinal treatment is difficult. Super-alimentation may occasionally be successful. Fibrous foods are specially to be avoided. He recommends specially pancreatine and bitters and also tannin, about eight grains of the latter being given in twenty-four hours in small doses. Opium, he believes, is indispensable.

13. Dysentery.

General Treatment.—Hanna (Therapeut. Gaz., September 10, 1888) recommends that, in the first place, the portal circulation should be relieved by saline cathartics and large rectal injections of warm water. In children, syrup of rhubarb and castor-oil may be substituted for salines. In hemorrhagic dysentery, half a drachm each of the fluid extract of ergot and laudanum in four ounces of water forms a useful mixture, of which one teaspoonful every hour is generally sufficient. In some cases, after the

hæmorrhage has abated, a combination of five grains each of

Dover's powder and subnitrate of bismuth is useful.

Local Applications.—A writer in the Therapeut. Gaz., August 15, 1888, distinguishes between the intestinal diseases of camps, prisons, and other crowded places, which he regards as being probably constitutional in origin, and the sporadic cases of dysentery resulting from excessive heat, together with imprudence of diet, which he looks upon as being essentially local affections like pleurisy and sunburn. He recommends, therefore, local treatment in these latter cases, e.g., injection per anum of two quarts of water containing a drachm of nitrate of silver. He also suggests the use of perchloride of iron and nitric acid in a similar manner. No absorption of the drug is believed to occur.

manner. No absorption of the drug is believed to occur.

Creolin Injections.—Ossorski of Tobolsk (Lancet, January 18, 1889) communicates a series of trials of creolin injections in dysentery. The results were satisfactory. In some cases, creolin arrested the dysentery, but left behind a catarrhal condition of the mucous membrane. In these cases, injections of acetate of lead and tannic acid, together with the internal use of cinchona and

sulphate of soda, had to be resorted to.

Carlsbad water.—Belleli (Gazz. degli Ospitali, October, 1888; and Lond. Med. Record, 1889, p. 51) concludes a paper on this subject with the remark that enemata have grave disadvantages. He believes that to daily distend the colon stimulates the rest of the digestive tract, and so causes imperfectly digested food to be hurried into the large intestine, which it irritates. Moreover, the enemata tend to diminish the normal contractility of the muscular walls of the colon. He believes then, that enemata are only of use in slight lesions of the colon; but that in other more severe cases Carlsbad water, taken on rising in the morning, is much better treatment.

Creolin as an antiseptic and antiparasitic in the intestinal canal.

Hiller (Deutsche med. Wochenschr., 1888; and Clbltt. f. klin. Med., 1889, p. 39) has made extensive use of creolin as an antiseptic in many disorders, and amongst others in those of the stomach and intestine. He found that the drug was very rapid in its action in relieving meteorismus from whatever cause it arose. It was of great service in flatulence from acute and chronic catarrh of the intestines, and in the fulness of the stomach after eating which occurs in lesions of stomach digestion, and in putrefactive changes of the intestinal contents. It was of service also in dilatation of the stomach and in simple diarrhoa. The drug was given in capsules, and in doses of from five to fifteen grains three

times daily In two cases it seemed to act as an antiparasitic

against tænia solium and oxyuris vermicularis.

For decomposition of the intestinal contents, especially in infectious diseases (Berl. klin. Wochenschr., July 4, 1889), the following prescription is recommended:—

Creolin		12 parts.
Alcohol dilut		2 ,,
Powdered tragacanth		2 ,,
Extract of liquorice		24
Powdered liquorice root	100	142 11

To make 200 pills. Two pills to be taken two or three times daily.

15. Lead colic.

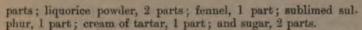
A Torre (Bull, Thérap., 1888; and Clbltt. f. med. Wissensch., 1888, p. 896) recommends for the treatment of lead colic a rectal injection of ether vapour. A caoutchouc tube is introduced into the rectum, and connected with a flask containing ether which is placed in hot water. After the vapour of about one gramme of ether is injected relief is experienced, and castor-oil should then be administered.

16. Chronic constipation, treatment of, by gal-

Galvanism—Hammond (New York Med. Journ., Feb. 9, 1889) has treated many cases of constipation with striking success, by means of a weak constant current, the negative electrode being applied well within the sphincter. Five minutes of this treatment have brought about relief after months of ineffectual catharsis.

The sulphur lozenge.—Sir Alfred Garrod (Lancet, i., 1889, p. 665) has introduced a method of administering sulphur in the form of a lozenge, which is at once convenient and effective. In this way small doses can well be continued for a lengthened period, and so the drug has a fair opportunity of influencing chronic processes. The lozenge is called the Compound Sulphur Lozenge, and it contains 5 grains of sulphur and one of cream of tartar. Amongst other diseases it was found to be beneficial in certain disorders of the alimentary tract, as in hepatic sluggishness, piles, and hæmorrhoidal hæmorrhage, and in habitual constipation.

Compound liquorice powder.—J. H. Fisher (Brit. Med. Journ., April 6, 1889) recommends the following formula as being pleasanter, more easily miscible with water, less liable to gripe, and slightly more aperient than the pharmacopeeial preparation, besides possessing directic and refrigerant properties. Senna, 2



The sugar is only necessary to hide the taste of the other ingredients. It should, of course, be left out when the powder is ordered for a diabetic. I have known this precaution neglected, much to the concern of the patient, who discovered the discrepancy in his treatment.—R. M.]

Natural aperient mineral waters. - Hehner (Brit. Med. Journ., Feb. 16, 1889) finds on analysis of the mineral waters from Ofen, in Hungary, that the laxative powers are, in some specimens, greater by two-thirds than in others. He points out that the composition of waters as stated on the labels is no guarantee of their strength, since the analyses quoted are those of speciallyselected samples often made many years ago. He suggests that the specific gravity should be the criterion of strength.

17. Extract of malefern for tænia.

J. O. de Man (Therap. Monatsh., Jan., 1889, and Med. Chron., ix., p. 505) recommends for tapeworm much larger doses of extract of malefern than are usually exhibited. He has given from 2 to 9 drachms in twenty-eight cases, the average dose being about 6 drachms. In only three cases was it necessary to repeat the medicine, and then only because the first dose was vomited. In all the other cases the worm was expelled in two or three hours, and did not re-appear. In a few cases diarrhea followed these large doses, but it soon ceased. The drug was given in

capsules.

The Brit. Med. Journ. (1889, i., p. 319) calls attention to the discrepancies in the various doses of malefern ordered by different authorities. It mentions a case where liquid extract of malefern was given in two doses of 6 drachms each at an interval of three or four hours; violent vomiting and purging ensued, and the patient died in a short time. Another case of poisoning is reported in the Prager med. Woch. (1888, No. 41). where, after the administration of equal parts of etherial extract of malefern, and extract of pomegranate, in two doses, one of half an ounce the other of 5 drachms (in all about half an ounce of the extract of malefern) vomiting, collapse, and unconsciousness set in, and lasted for thirty hours, while blindness of one eye remained for fourteen days. Such heroic doses as are mentioned above must therefore be considered not devoid of danger.

Large doses of extract of malefern are certainly not necessary, provided the drug be properly administered. preparations vary a good deal in efficacy. In dispensing the extract, the bottle should first be well agitated. Two drachms are an ample dose if given fasting two hours before leaving bed. A preliminary dose of castor-oil overnight is useful.—D. D.]

18. Meat food.

Jessop (Brit. Med. Journ., August 31, 1889) finds that four ounces of meat can be suspended in twenty ounces of water, and be taken without disgust, and further that two to four ounces of this fluid every four hours is sufficient for any invalid. He recommends that the meat be of good quality, and that having been well minced, it be boiled in a digester for three or four hours, at the same time being frequently stirred, and rubbed about with a wooden masher. If required for rectal injection, only half the quantity of water will be necessary. This method gives a greater proportion of albuminoids, fats, and salts in the broth than does any other.

19. Obesity.

Towers-Smith (Brit. Med. Journ., ii., 1888, p. 790 and p. 1,073), from personal and other extensive experience, recommends a treatment of obesity by nitrogenous diet and hot water. The most severe treatment is the following:—Breakfast, one pound of rump steak without fat. Luncheon, another pound of rump steak. Dinner, one pound of grilled cod, and one pound of rump steak. In the twenty-four hours, a gallon of hot water is drunk, and every night and morning five grains of bi-carbonate of potash are taken. This treatment, persisted in for fifteen days, caused a reduction of weight of one stone four pounds, and after being slightly relaxed in severity, produced a diminution of two stones six pounds within thirty-nine days. An ordinary diet was then taken, and at the end of two months from the commencement of the course, the weight was nearly three stones less than at first, and then did not vary.

When it is not desired to produce a great reduction of weight in a short time, a less severe regimen, according to cards issued by the author, may be adopted, but the principle is the same as

that stated above.

[In every case of obesity, great care should be exercised before determining any special line of treatment. Much harm may follow attempts to reduce obesity by Procrustean methods. Worse evils may ensue. Many cases are due to over-eating and drinking, insufficient exercise, etc. In some persons, obesity is a simple manifestation of the peculiar trophic habit of the individual, and had better be left untreated, or gently dealt with. The obesity of abstainers from alcohol is best treated by reduction of fat, sugar, and fluids in the food, and a little sound wine taken daily will prove of much benefit.—D. D.]

DISEASES OF THE KIDNEY, DIABETES, ETC.

By CHARLES H. RALFE, M.A., M.D. CANTAB., F.R.C.P. LONDON, Physician to the London Hospital.

1. Albuminuria.

The chief interest during the past year has been the descriptions and contributions relating to the nature of those anomalous forms of albuminuria which are apparently independent of inflammatory lesions of the kidneys. Dr. Ralfe (Lancet, Oct. 25, 1888), in a paper read before the South-Eastern Branch of the British Medical Association, was of opinion that albumen frequently appeared in the urine independently of any structural lesion of the kidneys or urinary passages, and which, for convenience, he was inclined to term "functional albuminuria," a title which had been bestowed by Prout and some of the earlier observers, and which was preferable to the more special designations "physiological albuminuria" or the "albuminuria of adolescents," since, in the first place, he was not inclined to admit that such albuminuria was physiological, and also that it was not limited to adolescents. Dr. Ralfe described "functional albuminuria" as occurring under three conditions:-(1), Cyclic, in which the albumen recurred periodically at certain hours, and which seemed to bear a definite relation to the hour of rising and the morning meal, since the exacerbation of the albuminuria occurred before noon, whilst it was frequently absent during the later hours of the day, or, at all events, in diminished quantities. A similar periodic disturbance has been noted by Bence-Jones and others with regard to the deposition of phosphates, who have shown that in weak and delicate persons the urine in the forenoon is frequently alkaline, and deposits calcium phosphate, whilst later on it recovers its acidity. form of albuminuria is met with frequently in young adults, and has in consequence been termed the "albuminuria of adolescents," but a similar periodicity is often observed in the albuminuria of older persons. (2), Paroxysmal albuminuria. This form was originally described by the author in a paper read

before the British Medical Association at Brighton, 1886. this form, although there are exacerbations of the albuminuria, they are not regularly recurrent, but occur at any period of the day. In well-marked cases the appearance of the albumen in the urine is often ushered in by a feeling of distinct malaise, gastric disturbance, and some degree of sallowness. The urine is usually of high specific gravity (1020-25), contains a considerable amount of pigment, sometimes bile pigment. The albumen may continue present in the urine for some days, or even longer after a paroxysm, but in less quantity, rising again directly when a fresh paroxysm occurs. It may go on for years, but usually yields in time to treatment by iron, arsenic, and quinine. It seems in many respects to resemble paroxysmal hæmoglobinuria, and, like it, occurs in persons who have been exposed to malarial, syphilitic, gouty, or rheumatic poisons. From the increase of urea and urinary pigment, Dr. Ralfe is disposed to think that the albuminuria in this instance is due to increased "hæmolysis" in the liver. The patients in which it occurs are mostly those of early middle age. (3), Intermittent albuminuria. This form is neither cyclic nor paroxysmal in its character. The albumen may only appear in one or two samples, and then disappear; or it may go on for some time continuously, then cease again, to re-appear and again pass off, and so on. This form presents the greatest difficulty, and may most readily be taken for organic disease or vice versa, whereas with a little observation it is difficult to be misled by either cyclic or paroxysmal albuminuria. In this form, when the amount of albumen is scanty we may take it for contracted kidney; when abundant, for recent nephritis. We have here, then, to take other considerations under notice-the condition of the pulse and heart, the presence or absence of casts, and above all the per-sistent low specific gravity of the urine, a fact which is of the utmost value in deciding for or against the existence of chronic renal disease.

At the meeting of the British Medical Association at Leeds

in 1889 the subject was also very fully discussed.

Dr. Pavy (Brit. Med. Journ., August 24, 1889) also divided these forms of albuminuria into three groups:—(1), Cases in which traces of albumen were observed; (2), cases in which a notable amount of albumen exists, and is always present; (3), cases in which a notable amount of albumen is found at one period of the twenty-four hours, and none at another—in a word, "cyclic albuminuria." As regards the first of the enumerated groups, in which only traces of albumen were present, Dr. Pavy's experience leads him to say that it is not to be regarded as an exceptional

circumstance to find urine containing traces of albumen without the case being such as to justify the conclusion that anything of the nature of renal disease exists, though of course the granular kidney is the form of renal disease which is especially associated with small amounts of albumen; therefore more attention must be paid to the collateral interests of the case before a determination is arrived at. The second group is that in which a notable amount of albumen exists and is always present. Instances are sometimes come across of the description named, where no history of nephritis can be elicited, no casts or tubules discovered, and none of the general symptoms of Bright's disease recognised. Dr. Pavy is not prepared to give a definite opinion about the future of these cases, but he believes there are some which run on without any very serious results arising. would, however, be only in a case which had been under observation for a considerable time without anything wrong developing that he would venture to look for a favourable prognosis. The third group, having a distinctly "cyclic" character, are admittedly cases of functional albuminuria, and something more-namely, a functional albuminuria with a special, sharply-defined, and readily noticeable character—the albumen at one period of the day being present and at another absent, and that this albuminuria recurs day after day with the same regularity.

Dr. George Johnson will have nothing to say to either "physiological" or "functional" albuminuria; all albuminurias are pathological. The following are the main points of his doctrine :-The presence of albumen in the urine, though it may be small in amount and intermittent, is always pathological. The practice of testing the urine in all cases of ailments has led to the detection of albuminuria in many youths and adolescents, who are liable to be exposed to the commonest of its exciting causes-namely. cold, wet, and over-fatigue-and who have not lived long enough for the ultimate evil results of a neglected albuminuria to have become developed. Albuminuria, whether intermittent or persistent in persons in apparent good health, has no such special features as to require it to be designated by such misleading terms as "physiological," "functional," the "albuminuria of adolescents." Nearly all cases of acute nephritis pass through the stage of intermittent albuminuria in their progress towards convalescence; and, on the other hand, the majority of cases of intermittent albuminuria may be traced back to a more or less remote attack of acute nephritis. While, on the other hand, intermittent albuminuria-even though it may have existed for years-may be looked upon as a curable condition if only its exciting causes can be ascertained, avoided, and counteracted by

suitable dietetic, medicinal, and hygienic means.

Dr. Gairdner, whilst freely admitting a "functional albuminuria" with certain limitations, is sceptical, or more than sceptical, as to physiological albuminuria. He would always regard the presence of serum albumen in urine as a danger signal, but as regards its presence in individual cases was neither possimistic nor optimistic.

Dr. Saundby confesses himself a firm believer in the innocent character of albuminuria in certain cases, and he also believes that many forms of this innocuous albuminuria exist, but they are badly defined, and their prognosis is at least unascertained.

Dr. Pye-Smith believes that there is no "physiological" albuminuria, and that "functional" albuminuria was really pathological for the time being; and we must remember that the same conditions—viz., excessive exercise, temporary asphyxia, or external cold—that may cause temporary albuminuria in apparently healthy persons will also increase albuminuria in cases of Bright's disease. One form of occasional "functional" albuminuria was that which was really a slight form of paroxysmal haemoglobinuria. Dr. Pye-Smith compared albuminuria with hemoptysis. It was always serious, though it did not always indicate organic disease. Even when there were indications of structural disease of the kidneys, our prognosis might be favourable, for Bright's disease, like phthisis, was curable. Even when believed to be functional, it was better to defer an opinion than attempt to define what may prove an insoluble question.

[Taken as a whole, the practical bearing of this year's work as regards albuminuria is towards a more hopeful view as to the nature of the disorder. Not only is there a general consensus of opinion that many of the cases are innocuous, even if they are not purely functional, but many have expressed themselves decidedly as regards the curability of Bright's disease, an expression of opinion which ought to make us more persevering in our attempts, and more solicitous of determining the most efficient methods of

treatment to effect a cure.]

2. Diet in albuminuria.

Professor Schreiber (Berlin. klin. Wochenschrift, No. 23, 1889) has contributed some observations on the much-vexed question of the admissibility of an albuminous dietary in chronic Bright's disease. Contrary to the views held by Senator Semmola, Gubler, and others, he holds that the injurious effects of eggs are open to question. To prove this, he administered to four patients, whose urine on ordinary diet had been previously under observation to

determine the fluctuations of the albumen, six boiled eggs daily in addition to their usual food. After the eggs were discontinued, the albumen was still estimated for some days, when it was found that in none of the cases during the period of administration was there any fluctuation or increase in the amount of albumen excreted. In a similar experiment, with from six to ten raw eggs, there was absolutely a diminution. Professor Schreiber is of opinion that neither mixed diet, meat, nor milk, influences materially the excretion of albumen. Professor Schreiber advises that in chronic Bright's disease the diet should be an ordinary mixed one, and that to it should be added fluid or coagulated albumen or meat; and that, as milk does not increase the amount of albumen, it is advisable to combine it with the ordinary food. We ought not to attempt, he says, a special diet for Bright's disease. The diet should be maintained on a broad basis, remembering we are dealing with a disease slowly consuming the bodily strength, whilst any special article of diet should be given to meet any necessity without reference to any endeavour to regulate the loss of albumen by the kidney.

[Professor Schreiber's views are in accordance with those of Oertel, Niemeyer, and Leyden, whilst the experiments of Dobradin of St. Petersburg have also shown that the ingestion of eggs does not increase the amount of albumen in the urine. The question

is also discussed in the "Year-Book," 1888, pp. 81-83.]

3. Milk diet in albuminuria.

Dr. Saundby ("Lectures on Bright's Disease" [Wright], 1889) is doubtful of the advisability of employing an exclusive milk diet in chronic renal disease. Not only does he think the patients on such a diet are insufficiently fed, but that an exclusive milk diet gives rise to acidity, which is highly injurious to those whose

powers of elimination are already enfeebled.

[Contradictory statements have been made from time to time regarding the value of the exclusive milk diet in Bright's disease, and the whole subject requires careful consideration. As a temporary measure in acute nephritis, or in subacute nephritis, supervening in renal cirrhosis, I have seen it effect a distinct diminution in the amount of albumen, increase diversis, and relieve the dropsy. On the other hand, in the more chronic forms, especially associated with degenerated vessels, I have not found the patient thrive on milk, but to become distinctly weaker during its employment.]

4. Inhalation of oxygen in albuminuria.

Dr. Robledo (Rev. de Med. y Cirurgia Practicas, March 22, 1889) observes that the indication for the employment of the

inhalation of oxygen is the existence of anemia, and in albuminuria and diabetes it may be employed as an auxiliary to the general treatment. It is best administered in doses of from 10 to 15 litres twice daily, and the oxygen is most readily obtained from the decomposition of chlorate of potash by heat

5. Hydrochloric acid in Bright's disease.
Dr. Girard (British Med. Journal, June 2, 1889), of Geneva. has published a case of a patient aged 40 years, who suffered from dyspepsia the result of chronic catarrhal nephritis, in whom the administration of 0.3 per cent. solution of hydrochloric acid caused marked exacerbation of the renal symptoms, Dr. Paul Demieville, also of Geneva, records a very similar case. In both the patients speedily improved under milk diet and ordinary soothing remedies. Dr. Demieville thinks that hydrochloric acid. even in ordinary medicinal doses, has an injurious effect on diseased renal epithelium, and that it should not be administered in chronic nephritis, nor in those acute zymotic disorders in which kidney complications are apt to ensue. Dr. Bourget, however, relates a case which does not seem to justify such apprehensions, of a man, aged 28, who attempted to commit suicide by swallowing nearly three ounces of commercial hydrochloric acid. His urine and vomited matter were examined daily till his death three months later of gastric stenosis, when the kidneys appeared quite healthy, whilst during life no free hydrochloric acid nor any increase of chlorides was found in the urine; on the contrary. for whilst the vomited matter contained 10 per cent. of sodium chloride, the chlorides in the urine were distinctly lower than From this Dr. Bourget concludes that HCl is not eliminated by the kidney, and that, as the kidneys remain intact even after the ingestion of 100 cc. of concentrated acid, it may be concluded that diluted HCl administered in small medicinal doses cannot cause lesions in kidneys.

6. Morphine in uramia.

By Dr. Stephen Mackenzie (Lancet, Aug. 3 and 10, 1889) two cases are detailed: -(1). A woman, aged 38, suffered during last two pregnancies from swelling of legs, which persisted after the birth of last child seven months before coming under treatment. There were anasarca, ascites and dyspnœa, cardiac hypertrophy and albuminuric retinitis. The urine had a specific gravity 1012 to 1018, contained to g albumen, and numerous granular casts. After marked improvement on non-nitrogenous diet, diaphoretics, diuretics, and purgatives, she was seized with severe nocturnal dyspnea. Nitrite of amyl, alcohol, ammonia, and ether, were used without effect. After treating the patient for an hour and a half, the attack showing no signs of abating, & grain of hydrochlorate of morphine was injected hypodermically. In a few minutes the dyspnea became less urgent, the patient easier, and the heart's action slower and stronger. In twenty minutes the patient was able to lie down, and in the morning was in her usual condition. Many subsequent attacks were relieved by morphine when other treatment had failed. It was found that chloral hydrate in doses of from ten to twenty grains, along with half an ounce to an ounce of whisky or brandy, was useful in checking the attacks at their commencement, or if slight; but none of the attacks, however severe, resisted the injection of one-sixth of a grain of hydrochlorate of morphine hypodermically. Liquor morph. hydrochlor. and liquor morph. bimeconate, were administered eight or nine times by the mouth. On no occasion were any toxic effects produced by the morphine. The patient gradually sank three months after the onset of

uræmia, and no autopsy was permitted.

(2). A woman, aged 28, who had been twice previously in the hospital for chronic Bright's disease of four years' standing, was admitted for anasarca and dyspnæa. She passed about forty ounces of urine per diem, containing & albumen. There were hypertrophy of heart, mitral reflux, and albuminuric retinitis. She improved for a time under appropriate treatment, but five weeks after admission began to suffer from great sleeplessness, severe headache, nausea, breathlessness, and irregular action of the heart. Chloral, bromidia, nitroglycerine, and inhalations of oil of juniper, were given with little benefit. The symptoms increasing, liquor morph, hydrochlor. m x was given, and repeated in three hours. followed rapid alleviation of the symptoms. The medicine was repeated on many occasions, each time relieving distress, palpitation, and dyspnica. After an interval, during which she was comparatively well, she had relapses of the same symptoms, always relieved by morphine. She ultimately developed a carbuncle, from the combined effects of which and the kidney disease she The kidneys were found atrophied and cirrhosed.

These cases serve to show that morphine may be given with safety and benefit in cases of renal disease, in spite of the general opinion of the danger of administering opium and its salts when the kidneys are diseased. The author was led to use morphine in chronic ursemia from the success that had attended its use in acute ursemia, ursemic convulsions, etc., by Loomis and others, who have given as much as half a grain to one grain in a single dose hypodermically. He next proceeds to discuss the nature of ursemia, pointing out that it had long been shown that this was not due simply to the retention of urea. Researches by Bouchard,

Feltz and Ritter, and others, showed that in uramia certain toxic substances, several in number, having different effects, became developed in the urine or body. Uramia, being a poisoning of the nervous system by substances formed in the body of the patient, was to be treated by (1), eliminating from the body the poisons already present, (2), the counteraction of the poisons. (3), the prevention of the further formation of poisons in the After pointing out how the first and third indications were to be fulfilled, he next proceeds to discuss the second, the counteraction of the poisons. It is in this way that morphine probably acts. Uramic dyspnea or renal asthma is due to spasm of the pulmonary arterioles or bronchioles, and morphine probably acts by antagonising the poison that excites the spasm. Dr. Ralfe has recorded a case of chronic uramia with similar good results. Attention is next drawn to the writings of Loomis and others on the treatment of acute uramia by morphine. He concludes, "I do not recommend its [morphine's] indiscriminate use; and in the light of the asserted susceptibility of patients with disease of the kidneys to the toxic effects of opium, it will be given with eves open to its danger. It certainly afforded striking relief to the cases I have narrated; and though in these I can only claim a palliative and not a curative influence, they were cases in which, from their nature and degree, no other result could be expected. In less advanced cases, where the kidneys are capable of recovery, better results may be hoped for, and indeed have been obtained.

7: Morphine and codeine in diabetes.

Prof. Fraser (Brit. Med. Journ., vol. i., 1889, p. 118) has followed in the same line as Dr. Mitchell Bruce, whose experiments we have dealt with fully in the "Year-Book of Treatment." 1888, 1889, and has obtained exactly similar results. Dr. Fraser's observations, however, were made quite independently of Dr. Bruce, and without any previous communication. His conclusions are that codeine has a decided effect in the reduction of both the sugar, urea, and the quantity of urine. Compared with the reduction obtained by strict diet, the administration of 9 grains of codeine lessened by one-third, and 15 grains by one-half the quantity of sugar, urea, and the quantity as well as specific gravity of the urine. The addition of $\frac{1}{20}$ and subsequently of $\frac{1}{10}$ grain of sulphate of atropine to the codeine caused a slightly further fall. Six days after the administration of the codeine was stopped, the administration of half a grain of opium three times a day caused a marked reduction. With one grain of opium the reduction was to less than one-half. grain and a half there was a further reduction; whilst, as before,

the addition of $\frac{1}{20}$ grain daily of sulphate of atropine reduced the excretion still more. With restricted diet, with $\frac{1}{3}$ grain of hydrochlorate of morphine thrice daily, there was also produced a marked reduction, and the conditions were more satisfactory than with the 15 grains of codeine. When the latter was taken, the appetite failed, the patient became listless, apathetic, and sometimes experienced vertigo; with one grain daily of hydrochlorate of morphine, the condition was more satisfactory. In all Professor Fraser's cases the morphine showed an undoubted superiority over codeine, and the evidence seems to point to the conclusion that codeine is a less powerful remedy in diabetes than either

opium or morphine.

With regard to the employment of either codeine or morphine in diabetes, it is well to remember that every diabetic has his own special tolerance of the drug, and that some show a decided preference for one preparation more than for another. The best results I have obtained have been with solid opium given immediately after each meal. In this way, by being slowly absorbed, it has a longer sugar-restraining influence over the glycogenic function than when given in the form of the soluble alkaloids. Morphine in the solid form, given in pills, I have found more effectual than when administered in the liquid form, neither crude opium nor morphine is well tolerated, then I have found preparations of morphine combined with some of the other ingredients of the drug-such as bimeconate of morphine, nepenthe, which is a mixture of codeine and morphine-very useful. Professor Fraser's observations with regard to the action of atropine when combined with either codeine, opium, or morphine, in still further effecting a reduction in the amount of sugar excreted, bear out the observations of M. Villemin (La France Méd., Paris, vol. i., 1887) quoted in the "Year-Book" for 1888, p. 88, of the beneficial results obtained by combining the two drugs, a plan which I have since tried with advantage.]

8. Codeine v. morphine in diabetes.

Dr. Lindsay (Brit. Med. Journ., May 18, 1889) at a meeting of the North of Ireland branch of the British Medical Association read the notes of the case of a man, aged thirty-eight, who had lost two stones in weight in two months, and was passing from six to seven pints of urine containing 30 grains of sugar to the ounce. Diet was strictly regulated; milk was freely given as a drink; and morphine administered. Under this treatment the patient became rapidly worse. The milk was then entirely withdrawn, cream of tartar being substituted as a beverage, and codeine in full doses was substituted for morphine. Rapid and continuous improvement followed. Dr. Lindsay expresses himself as very adverse to the skimmed milk treatment of diabetes, and is inclined to agree with Dr. Pavy that codeine is the best pre-

paration of opium to employ.

[In this case the improvement no doubt was largely due to giving up the skimmed milk, which, however useful it may prove in cases of gouty glycosuria, is decidedly injurious in cases of true diabetes. With regard to the exchange of codeine for morphine, that, too, might have played a part in the improvement, since, as I have remarked above, every diabetic seems to have his own special tolerance for the drug, and that some show a decided preference for one preparation more than another.]

9. Arsenic and lithium in diabetes.

Dr. Dujardin-Beaumetz (Bull. Gén. de Thérap., March. 1889). reviewing the recent advances made in the treatment of diabetes. considers the most important is the administration of arsenicated lithia water, of which the "Year-Book" for 1888, p. 89, gave an account when first proposed by Dr. Martineau. Dr. Dujardin-Beaumetz gives 8 grains of carbonate of lithium in a glass of Vichy water. to which two drops of Fowler's solution have been added, to be taken before each meal. He also speaks highly of "soja" bread as a dietetic agent in diabetes, though it has a disagreeable taste and laxative action; this latter, however, is an advantage. He still maintains that potatoes yield less glucose than an equal weight of best gluten bread (vide "Year-Book" for 1888, p. 91, where his observations on this point are criticised), and therefore considers potatoes preferable to gluten bread. "Soja," to which reference is made above, is a plant belonging to the Leguminosæ, and is indigenous to China and Japan. The seeds contain so little starch (only 3.2 per cent.) that bread made from it is recommended to replace the gluten bread in ordinary use. They are extremely rich, according to M. Egasse (Rev. Gen. de Clin. et de Thérap., Dec. 20, 1888), in fatty matters, and the oil when extracted has laxative properties, which in some degree affects the bread. Its only drawback is its disagreeable taste.

10. Gymnastics for diabetes.

Dr. Aye (Berl. klin. Wochens., No. 30, 1889) records three cases in which gymnastic exercises have done good. The movements, till the patients were accustomed, were passive, but afterwards were directed to as many groups of muscles as possible. Dietetic restrictions were enforced at the same time. In one case, a man, aged forty-three, with 6 per cent of sugar, frequent micturition, itching of the skin, and weakness, with restricted diet and opium, the amount of sugar became reduced, but the weakness

increased. Soon after he commenced gymnastic exercises, his general condition improved, and his strength increased week by week, in spite of the fact that he could not continue his diabetic regimen,

and had to give up his opium.

[The employment of massage and moderate exercise have been shown to be beneficial in diabetes, especially the former. Gymnastics, by systematically exercising certain groups of muscles, is nearly as valuable as massage. In both, however, care must be taken not to fatigue the patient, since after an undue amount of massage, as after over-exertion, diabetic coma may be induced.]

11. Infantile diabetes.

Dr. Jacobi (Archives of Pediatrics, Nov., 1888) remarks that though traces of sugar are frequently met with in the urine of nurslings, and in children supplied with excessive amounts of sugar in their food, this is not diabetes, which is not so frequent nor so rare in children as has been variously declared. When diabetes is present in infants, it usually runs a rapid course, and terminates quickly in death-usually by coma. The treatment must be vigorously enforced, especially anti-diabetic diet, which fortunately, as children subsist chiefly on milk, presents fewer difficulties than with adults. The use of opium, owing to the readiness with which cerebral symptoms develop, is not advisable, but alkaline remedies are called for. Salicylate of sodium, with an alkaline beverage (Setters Vichy), is decidedly useful in doses, for a child of five years of age, of from 5 to 8 grains three times a day. Arsenic, the bromide as well as other solutions, in onedrop doses, gradually increased to four, taken after meals, may be taken with advantage; whilst iodoform is seldom well tolerated. Diabetes insipidus is, however, more common among children than diabetes mellitus. Inveterate masturbation seemed to be the cause in several children between the age of from four to eight years, and the disorder gradually ceased on the abandonment of the habit. Syphilitic and other brain lesions have also been found in connection with it. As remedies, valerian, valerianate of zinc, bromides, salicylate of sodium, galvanism of the head, have proved unsatisfactory; but good results have followed the administration of ergot and atropine; more reliable, however, is strychnine in three daily doses of 100 grain.

[To these remedies may be added antipyrin, which I have

found successful in some cases.]

12. Antipyrin in diabetes.

Le Progrès Méd., April 13, 1889, gives an account of the recent discussion of the use of antipyrin in diabetes. M. Panas strongly advocates it, having in two cases succeeded in completely

checking the excretion of sugar by means of daily doses amounting to 3 grains, the sugar gradually reappearing when the drug was discontinued. M. A. Robin has found antipyrin useful when the patient's condition had been long stationary, and he was finding the strict dietetic regulations irksome; in such cases treatment by antipyrin might be substituted for treatment by diet, but care must be taken not to employ it when there was much emaciation, pallor, or puffiness of the eyelids. M. Germain Sée has not found antipyrin advisable when there was a very abundant discharge of sugar, or if the patient was affected with phthisis; but in other cases in whom the amounts of sugar passed before treatment had not been more than moderate, his experience had been very favourable. M. Dujardin-Beaumetz also gave a favourable verdict, and observed that other bodies of the same chemical group as antipyrin have also some anti-glycogenic action. The fact, however, that antipyrin is not suitable in all cases of diabetes, as remarked by M. Robin and M. Germain See, is well illustrated by a case reported by Mr. Feeny, of Nice (Brit. Med. Journ., Sept. 21, 1889), of a clergyman, aged 64, who, while spending the winter months at Arcachon, consulted him. He had been in failing health for some time, and his French physician was treating him for diabetes. Mr. Feeny found a large quantity of sugar in the urine, and adopted the antipyrin treatment, when cardiac irregularity caused him to reduce the dose to 3 grains daily, after which his health improved, and amount of sugar became less.

[Antipyrin, from my experience, seems to be chiefly beneficial in diabetes mellitus in chronic cases running a tolerably regular course, and when there are no complications present. It acts chiefly by diminishing the diuresis, though in some cases there is also a decided diminution of the excretion of sugar. A dose of 8 to 10 grains given at bedtime, in suitable cases, often prevents the night being disturbed, from the patient not having occasion to micturate so frequently.]

13. Jambul in diabetes.

Mr. Mahomed (Practitioner, December, 1888) records a case in which a two-grain perle of jambul administered three times a day caused the sugar to disappear from the urine of a patient aged 60, after a week's trial; it reappeared, however, when the drug was discontinued. The patient suffered much from mental disturbance, and whilst under the influence of the drug suffered considerable depression. Four months after the regular commencement of the treatment the urine was free from sugar. For references to action of jambul in diabetes, vide "Year-Book" for 1884, p. 73; 1888, p. 88; 1889, p. 84.

14. Enuresis.

Dr. Campbell Black (Brit. Med. Journ., June 29, 1889) advises the administration of a mixture of potassium bromide, gr. x., with tincture of belladonna, m x—xx, every night at bedtime in all cases of over-excitation of the reflex arc, such as occur in enuresis, epilepsy, nocturnal emissions, etc. In cases where it may be necessary to discontinue the bromide of potassium, the monobromide of camphor may be substituted for it, the belladonna still being employed. The action of both drugs seems to be due to their diminishing the hyperæmia, by their tonic influence on the vaso-motor nerves, and reducing the excessive sensibility.

15. New vegetable diuretics.

Dr. Egasse (Bull. Gén. de Thérap., May, 1889) has found three plants, recently introduced, which possess considerable diuretic properties. The stems, twigs, and flowering tops of piché, or Fabiana imbricata, a native of Chili, made into a decoction (1 oz. to two pints of water), have given excellent results in cases of cystitis, gravel, and renal congestion. Three or four pints of the decoction should be taken during the twenty-four hours, or a fluid extract may be employed. The winter green (Chimaphila umbellata), which differs, however, from the winter green (gaultheria procumbens), has also been found to possess a therapeutic action similar to the above. Its habitat is Russia, Siberia, and North America. The flowering tops of the common bean (Faba vulgaris), which have been used for many years in Sicily as a popular remedy for gravel, have recently been extensively aried and found to possess remarkable powers as a sedative in cases of renal colic and dysuria, acting as an indirect diuretic and antispasmodic. About one-third of an ounce of the dried flowers added to two pints of boiling water, and the whole reduced to one pint, forms a decoction sufficient for twenty-four hours.

16. Calomel as a dinretic.

M. Buchard (Rev. Gén. de Clin. et de Thérap., April 25, 1889) has administered calomel on a plan recommended by Jendrassik (vide "Year-Book," 1887) to five patients suffering from cardiac ædema and dropsy. In two cases only was diversis produced, and that never lasted more than three days, when the secretion returned to the previous amount. In three cases salivation was produced. To prevent this, chlorate of potash should be given with the calomel; and to check undue diarrhea, opium. When diversis occurs, it is probably induced by lowering the blood-pressure, allowing the heart freer action. For references to calomel as a divertic, and its mode of action, see extracts from Jendrassik, Noel Paton, Silva, and Nothnagel, "Year-Book," 1886 and 1889.

17. Diuretic action of calomel.

W. E. Ignatjew (Petersb. Med. Wochenschr., No. 44, 1888) after the observations of Jendrassik undertook a series of experiments respecting the alleged action of calomel as a diuretic in a series of forty-eight patients, twenty of whom were suffering from dropsy attendant on cardiac disease, nine from emphysema, nine from diseases of the kidneys, seven from cirrhosis of the liver, and three from pleurisy. The patients took three times a day from two to three grains of calomel, to which were added two grains of opium. Ptyalism and diarrhea appeared in eight patients, of which four were cardiac cases. These patients passed in twentyfour hours 4,000 cc. of urine, instead of a general average of 300 to 400 cc. With the renal cases, however, except one case, the treatment did not produce this effect. The duration of the treatment was for two, three, and four days. If, during this period, the quantity of urine was not increased, the calomel was stopped on account of the accumulation of mercury in the tissues. The duration of the diuresis under the influence of the calomel varied from three days to three weeks. The author gives an interesting account of a woman suffering from cardiac dropsy who passed ordinarily 600 to 700 cc. of urine daily. On June 14 she took on three occasions the same day calomel combined with opium in the dose stated above. After five days the urine increased to 1,400 cc. a day, and under the influence of fresh doses of calomel the urine increased to 4,000 cc.

18. Sodium chloride as a diuretic.

Dr. E. Bernadski (Gazette de Clinique de Bot. Kiwe, Nos. 32, 33, 34, 35, 36, 37, 38, 1888) after a series of experiments in the laboratory of Professor Toumasse, of Warsaw, on dogs, after introducing 0.7 per cent. of sodium chloride subcutaneously, found that diuresis was increased during the early period, and that the urine contained less solid matter, except chlorides, and in the later period the diuresis diminished, and hæmaturia and hæmoglobinuria were induced.

19. Juniper berries as a diurctic.

British Med. Journal, January 12, 1889, remarks that Dr. Gold-schmidt, of Fehraltorf, highly praises the inspissated fresh juice of common juniper berries as the best diuretic for children. Attention was originally drawn to this remedy by Professor Vogel, of Dorpat, in his handbook on children's diseases. Whilst being mild, the remedy is said to be free from any unpleasant after-effect. Two or three teaspoonfuls of the juice should be given daily, diluted with water and sweetened. In a case of renal dropsy in a little girl aged seven the juice rapidly induced a profuse

diuresis, a complete and permanent recovery ensuing in a fortnight.

 Lactose as a diuretic.
 M. Germain Sée (Bull. Gén. de Thérap., July 15, 1889) remarks that milk, a very perfect aliment, is also a dioretic. Nevertheless. it is important to observe that certain invalids digest it badly, and that it often provokes a temporary glycosuria, and also promotes denutrition by the destruction of albuminoids. M. Germain Sée, struck by these objections, has inquired which principle in milk possesses diuretic properties, and having successively eliminated each of the constituents finds that it is solely due to the lactose-the sugar of milk which is found in the milk of all carnivorous and herbivorous mammals, in the proportion of 6 to 100 in ass's milk, 5 to 100 in woman's milk, and 4.8 to 100 in cow's or horse's milk. As a diuretic, the dose is 100 grammes a day in two litres of water, and the diuresis it provokes is superior to that obtained by taking four or five litres of milk, without giving rise to traces of lactosuria, glycosuria, or azoturia. In all the patients in the twenty-four or forty-eight hours which follow the administration of this quantity of lactose the urine increases from two litres and a half to four litres. For correcting the mawkish taste of lactose, it is necessary to flavour the water with a little cognac or peppermint. The action of lactose depends on the state of the kidneys. In cardiac dropsy, with sound condition of the kidneys, the diuresis is enormous; it is less if the urine contains '02 gramme of albumen, and none if there is more than 1 gramme. Lactose, according to M. Sée, is a physiological diuretic, more active than strophanthus, or digitalis, especially in cardiac dropsies. It is a remedy par excellence for the disorders which result when the heart fails to contract efficiently, Associated with iodide of potassium, it is admirable when dyspnæa is present. M. Dujardin-Beaumetz has substituted glucose for lactose, and has obtained analogous results. The dose is the same.

21. Hydro-nephrosis relieved by position. Mr. Hunter (Brit. Med. Journ., March 2, 1889) reports a case of hydro-nephrosis in which, thinking that a change of position might afford relief, the patient having already partaken freely of an aperient, he directed her to rest in bed, with the pelvis elevated on pillows. After remaining in this position for a few hours she suddenly felt a desire to pass water, and did evacuate a pint. Shortly afterwards she was again compelled to leave her pillows, and after passing about a pint and a half of urine discovered the swelling had disappeared.

22. Hæmoglobinuria, Effect of cold in.

Dr. Bristowe (Lancet, May 4, 1889), in a paper read before the Medical Society, April 29, described some experiments made by him and Dr. Coupeman in a case of hemoglobinuria under treatment at St. Thomas's Hospital. The first experiment was made on January 14th, when the patient was sent for a walk for three-quarters of an hour, well wrapped up, though it was not very cold. On return he was cold, bluish, and shivering; the throat felt swollen, and the feet were also very cold. His temperature was up 102° F., and after two hours he passed some reddishbrown-coloured urine, highly albuminous, presenting all the characters of hemoglobinuria. This passed off by the next day. The second experiment was made three days later, and the symptoms recurred, but in a milder form. An examination of the blood showed a reduction of red corpuscles, which had fallen to 2,760,000 per cmm. The discs presented great variety of shapes and size, and granular masses were floating about. specific gravity of the blood was 1047. On the third experiment the temperature rose to 102.4° F., and the number of corpuscles fell from 3,665,000 to 2,970,000 per cmm, There was no attempt at the formation of rouleaux. On March 6th the patient placed his hands in iced water for ten minutes. He had a slight rigor, and his temperature went slowly up to 101° F. The number of corpuscles fell as usual, and the urine contained one sixth albumen. In the evening an elastic ligature was placed round one finger, and dipped in iced water. A drop of blood taken from that finger showed the diffusion of hemoglobin still well marked, though still confined to the finger. On March 8th both hands were again placed in iced water, when the proportion of corpuscles fell to 2,984,000 per cmm. On April 13th he had a cold bath at 51° F., in which he remained ten minutes. Previous to it the number of red corpuscles was 3,399,000, and the hæmoglobin 53 per cent, Fifteen minutes after the bath the number of red corpuscles had fallen to 3,175,000, and the hæmoglobin to 49 per cent. Half an hour after the bath the patient passed hæmoglobin in abundance in the urine.

[The well-known effect of cold in inducing attacks of hamoglobinuria has led to the suggestion of "hardening" the patient to the effects of cold by means of cold baths. It is a question, however, in view of the considerable destruction of red corpuseles that occurs whenever a paroxysm is induced by cold, as shown by these experiments of Dr. Bristowe, whether this mode of treatment is advisable. The use of hot sea-salt baths, at temperatures of 94°, gradually reduced to 85° F., with the application of a douche of sea-salt water at 85° F. after the bath, seems to possess the advantage of rendering the skin less sensitive to cold, whilst no risk is run of inducing a paroxysm.

23. Antipyrin in renal calculus.

Philadelphia Med. Times, Feb., 1889, quotes some observations of M. Huchard which tend to prove that antipyrin possesses a solvent action in dissolving calculi in the urinary passages. One case, who continued to take 1 gramme of antipyrin per day for six months, found complete relief from pain, and also complete disappearance of gravel from the urine. Examination of the urine showed that it had become clear and limpid, and contained only a normal quantity of uric acid. M. Huchard directs that the drug be administered as follows :- Antipyrin, 15 grammes; bicarbonate of sodium, 5 grammes; mix for 30 cachets, one or two to be taken in the middle of meals. Renant, of Lyons, advises, however, in addition, that the water of Vittel and Contrexéville be taken as well. [A precaution which, as antipyrin probably reduces the diuretic action of the kidney, as is shown by the beneficial effects often obtained by it when employed in diabetes insipidus, is certainly advisable. The anti-lithic effect of antipyrin is probably caused by its preventing the excessive formation of uric acid.

24. Salol in renal calculus.

Dr. Waugh (Philadelphia Med. Times, vol. xix., 1889) administered 5 grains of salol every four hours to a patient who had been taking, among other drugs, antipyrin with little success, in 40-grain doses daily for a considerable time, the result being a "theatrical" cure. The patient was suffering from severe left renal pain; high-coloured, sometimes smoky, urine, at times loaded with urates, and containing pus, blood, and flakes of epithelium. There was a family history of calculi. From the first the patient began to improve, in a few days she was comfortable, in three weeks hardly a trace of pain, and the patient now looks well.

25. Urinary calculus, Geographical distribution of. (Brit. Med. Journ., Jan. 19, 1889). Although the effect certain soils have on the production of calculous disorders, whether due to the impregnation of the drinking-water with calcareous particles, or, as some think, to their dampness, is not well defined, undoubtedly districts do exist in which calculous disorders are specially rife. It is therefore of importance, as regards the preventive treatment of the disease, to be able to tell at a glance the district a patient comes from, in order to take prophylactic measures with regard to the drinking-water and subsoil drainage. The maps published by the Collective

Investigation Committee, showing the geographical distribution of rickets, rheumatism, chorea, cancer, and winary calculus, are therefore extremely valuable. Taking the map for England and Wales, we find that the chief distribution is in the eastern half. In Norfolk the towns of Norwich, Yarmouth, and Lynn show the chief prevalence; in Suffolk, Lowestoft, and Ipswich; towards Colchester, in Essex, the direction being checked. A scattered line, however, extends thinly through Cambridgeshire, Huntingdonshire. Bedfordshire, Lincolnshire to the East Riding, where its extension becomes checked. The fact, however, that is more important, and which the map reveals as a novel feature, is the prevalence of calculus in the Black Country. It is not clear, however, whether this prevalence is shared by the coalfields generally. In South Wales there seems to be a noticeable amount; whilst there is a certain tendency about Newcastle, and a decided prevalence in the Shropshire coalfield. But in the great Lancashire and Yorkshire coalfields the evidence of calculus is scanty. Maryport, in Cumberland, the only considerable place on the west coast that shows a decided tendency, is on a coalfield. The distribution in Scotland corresponds in a singular manner to that observed in England. The most-frequented districts being those of the Clyde Valley, and the coal-bearing districts that are scattered along the eastern coast upwards from the Firth of Forth until they find their greatest accumulation in the eastward-jutting angle forming the counties of Aberdeen, Banff, Elgin and Nairn. appears very free from calculus.

26. Phosphate of soda on the excretion of uric acid.

Dr. A. Haig (Brit. Med. Journ., vol. i., p. 1,227; Lancet, vol. i., 1889) has observed that the solvent action of sodium phosphate on uric acid is hindered by the presence of acids, or acid salts; and he advises that bicarbonate of soda be in all cases added to it when required for solvent purposes. He considers sodium phosphate of special use in the mental depression so frequently attending uric acid dyscrasia.

27. Miscellaneous.

The following brief abstracts refer to papers which, though not directly concerned with renal therapeutics, have a collateral interest:—

(a). Bulletin Gén. de Thérap., Feb. 28, 1889.—Dr. Mille. Chopin investigates the elimination of salicylic acid under certain conditions of the kidneys. It augments the secretion in health or in chronic disease, but decreases it in acute nephritis. The solid matters, as uren, uric acid, and phosphoric acid, are also increased.

About 80 per cent. of the acid finds its way into the urine in health. Albumen in the urine is always increased by salicylic acid. The total elimination is less by 20 to 30 per cent. with diseased than with healthy kidneys. In health also salicylic acid is eliminated almost unchanged; in disease a considerable proportion appears as salicyluric acid.

(b). Samml, klin. Vortr. Leipz., 1889, No. 336. - A. Peyer. Die

Phosphaturie.

(c). Zeitschrift f. klin. Med., Bd. xvi., Heft 3, 4.—Hans Leo on a case of cystinuria under observation four years; the patient a widow. The results, as regards medicine and treatment, were negative, the amount of cystin remaining practically unchanged. Although in many cases a diminution of uric acid has been observed, it was not so here. The urine was mostly turbid, but of normal colour, and more frequently alkaline than distinctly acid. The sediment always contained a great number of six-sided crystals of cystin.

(d). Bulletin Gén. de Thérap. M. Auguste Olliver reviews at length the various causes that give rise to the nocturnal incon-

tinence of children.

(e). Gazzetta degli Ospitali, Jan. 13, 1889.—Dr. Stephano Mircoli notices the frequency of renal complications in whooping cough (12 per cent.). The nephritis is not due, he thinks, to micro-

organism, but to venous stasis.

(f). Virchow's Archiv, Bd. cxiv., Heft 3, S. 400.—Dr. R. Fichtener discusses the pathological anatomy of diabetes mellitus, and raises the question whether the acute fatty degeneration of the kidneys sometimes observed is due to the passage of acetone

or some similar substance through them.

(g). Berliner klin. Wochenschrift, Nos. 1, 22, and 23, 1889.—
Professor Rossenbach investigates the nature of the burgundy-red
reaction which often occurs when certain urines are treated with
boiling nitric acid. It is, he thinks, a substance caused by the imperfect decomposition of albuminous matters in the intestinal canal,
and is associated with the presence of indican pigment. It is found
in three classes of urines:—(1), Serious intestinal obstruction,
never absent in ileus; (2), severe diarrhea brought about by
acute indigestion; (3), chronic diseases where nutrition is profoundly affected, as in phthisis, cancer, marasmus.

(h). Le Progrès Med., May 25, 1889.—M. A. Pillet, speaking of the varieties and causes of diabetes, fully discusses those where the diabetes seems allied with abdominal changes, of which atrophy or fibrosis of the pancreas is one of the most common. The clinical symptoms in these cases are very variable; there may be much fatty matter in the fæces, gastric intolerance, rapid loss of flesh, and earthy appearance of the skin, which usually accom-

panies affections of the solar plexus.

(i). Société Méd. des Hôpitaux, July 26, 1889.—Dr. Debove stated that of fifty cases of diabetes which had come under his observation, in five instances the wife suffered as well as the husband. Did this suggest contagion? M. Lécorche, who had also seen similar instances, suggests similarity of diet and participation in the same worries and anxieties as the explanation.

RHEUMATISM AND GOUT.

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DURING the year there has been nothing new to chronicle in the treatment of acute rheumatism. An important discussion upon the nature and treatment of gout, of which an account is given below, took place at the Wiesbaden Congress in April. The views of the speakers had nearly all been known previously, but their further experience renders the opinions expressed of greater value. Dr. Cheadle has published a valuable series of Lectures on the Rheumatic State in Childhood, which will be noticed in the section upon Diseases of Children. The principal work of the year in this department is Sir Dyce Duckworth's compendious Treatise on Gout, which has quite recently been issued.

1. Chronic articular rheumatism.

Movement.—Trastour (Rev. Gén. de Thèrap., March 28, 1889; and Lond. Med. Recorder, 1889, p. 149) recommends that, in spite of its causing pain, movement should be insisted upon in the treatment of chronic rheumatism, but the treatment should be commenced before adhesions have been set up between the articular surfaces. He has obtained gratifying results by directing his patients to exercise each of the affected joints for a certain time daily, and he combines this treatment with hydrotherapy and general constitutional roborants.

Sulphur.—Sir A. Garrod (Lancet, i., 1889, p. 665) has found that his compound sulphur lozenge is of great use in joint affections; and the more chronic they are, the more likely is sulphur to be beneficial. The lozenge is also a valuable adjunct to other remedies in the treatment of gouty states of the joints.

Electricity.—Erb has shown that in various forms of arthritis, whether of rheumatic or other origin, much benefit may be derived from the use of electricity. Exudation and pain may be made to disappear, and motion to return to the affected joints.

How this is brought about we do not know, but the practical value of the treatment in some cases cannot be doubted.

Walton (Boston Med. and Surg. Journal, vol. exix., p. 101; and Practitioner, December, 1888, p. 447) relates a case in which the results were striking. A man of thirty-two years of age had suffered some months before from rheumatic fever, involving several joints. The symptoms for the greater part disappeared but the right wrist remained the seat of considerable pain, redness, swelling, and stiffness. Flexion could be fairly well performed but neither extension nor adduction could be effected without great pain. The movements of the fingers were almost impossible, and the grasp with the dynamometer was zero. The extensor muscles were wasted, but did not show the reaction of degeneration. A moderate galvanic current was passed through the wrist and fingers, and both faradism and galvanism applied to the muscles, each daily sitting lasting for twenty minutes. Improvement was rapid, and at the end of five weeks there was no swelling perceptible at the wrist; all movements of the wrist and fingers were free, except that there was a little restriction to extension; the grasp was good, although not quite so firm on the right as on the left side.

Lumbroso (Lo Sperimentale; and Med. Chron., ix., p. 317) has used electricity in chronic affections of the joints with favourable results. In some there was considerable improvement, and in others complete cure. Electricity should never be used in the acute stage of the disease, for then it will not only do no good, but will increase the pain. The action of the electricity is local, and it promotes absorption of exudations. The voltaic is in most cases to be preferred to the faradic current, since it has a superior catalytic action. When a more stimulating effect is required, De Watteville's method of galvano-faradisation is recommended, and strong currents will be needed. The duration of the application should not exceed ten minutes. The sittings should be continued daily for about thirty days, and then may be limited to three in the week; after each, passive movements should be made.

[One of the most troublesome affections which we have to treat is the arthritis limited to one joint, generally the knee or ankle, which sometimes remains after an attack of acute rhenmatism. It was apparently in such cases that electricity was tried with good effect in the observations mentioned above, and a more extended experience of its use is desirable. It must be remembered that though strong currents be used, but a small amount of them enters the joints, since the electrical resistance of the skin is so great. It is difficult to understand how such a

slight current as the galvanometer shows to be passing through the tissues can exert a catalytic action. -R. M.]

2. Pain in the heels after rheumatic fever.

Berney (Brit. Med. Journ., Jan. 12, 1889) recommends the application of lin. iodi. for this affection. He applies the remedy as follows :- The heels are to be painted twice or thrice, at intervals of ten minutes, until they are black; and this treatment is to be repeated on the two or three following days, falling short of blistering. When the skin is somewhat recovered, the treatment is repeated if necessary. Farr recommends equal parts of glycerine and belladonna applied as a paint.

3. Rheumatoid arthritis. N. de Dominicis (*Rivista clinica*, 1888, p. 395), from a consideration of four cases, asserts that the so-called chronic joint rheumatism is, in the majority of instances, a constitutional disease, and not merely a local inflammation. A predisposition to the disease is necessary for its development, but dyspepsia, he thinks, is a most potent cause. This gives rise to disturbances of tissuechange, whilst leucomaines and tropho-neurotic influences bring about the local lesion. Cold, according to this view, would not be a necessary cause of the development of the disease. rational treatment should consist of the regulation of the digestion, and the prescription of a full diet, together with country

air and hydrotherapy.

[The actual pathology of the so-called rheumatoid arthritis or rheumatic gout still remains obscure, but its clinical history would show that the disease differs greatly from either rheumatism or gout. The observation reported above calls attention to only one of its associations. It is a disease related to a general atonic state, of which atonic dyspepsia is only a manifestation. As Dr. Ord has shown, it is in the female very frequently a sequence of uterine disorders. It often occurs at the time of the natural menopause. An artificial menopause, brought about by double ovariotomy, has, in two instances which have come under my notice, been followed by severe and destructive joint disease. I am inclined to think that the well-known association between rheumatoid arthritis and neurotic disturbances (see Dr. Archibald Garrod's paper quoted in the "Year-Book" for 1889, p. 100) is brought about by the medium of a depressed state of the general health. No local treatment is of much use unless combined with general tonics, amongst which change of air, scene, and society, must rank among the most powerful. It is sometimes remarkable how quickly, not only the pain, which is to a great extent neuralgic, but also the swelling of the joint-tissues, and the

effusion into the synovial cavity and tendon-sheaths, will disappear when the patient is removed from his surroundings, and his mental state rendered more cheery. Sulphur baths are useful adjuvants to the general treatment. - R. M.

4. Sciatica.

Freezing, -A few years ago Dr. Debove, of Paris, cured several cases of sciatica by spraying methyl-chloride on the skin over the sciatic nerve. The remely clearly acted by freezing the parts, and as the methyl-chloride is not easily obtainable, it has been suggested that the ordinary ether spray may be used in its stead.

Alonzo (Reforma Medica, No. 53, 1888; and Wiener Med. Press, March, 1889) reports a case in which excellent results were obtained from this treatment. The spray was continued on the occasion of each application for from twelve to fifteen minutes. as much as six and a half ounces of ether being used each time. Ughetti also had observed similar results in six or seven cases,

Antipyrin.—Covarrúbias (Brit. Med. Journ., March 16, 1889) has used antipyrin successfully in sciatica after all other remedies had failed. Eight-grain doses were given with an equal quantity of quinine three times a day, perfect cure resulting in ten days.

Parrott (Ibid., March 30, 1889) also has obtained good results from the administration of three 10-grain powders every three

hours.

Osmic acid.—Cohen (Medical News, April 6, 1889) described a case of sciatica which had been under treatment for about a year, the following measures proving absolutely ineffectual, viz. :-Arsenic, iodide of potassium, antifebrin, antipyrin; injections of atropine, morphine, theine; electricity, blisters, and nervestretching. Ten minims, fifteen minims, and twenty minims of a I per cent. solution of osmic acid were injected deeply into the thigh, near the point of emergence of the sciatic nerve-the first dose daily for three days, and the latter tri-weekly for about

three weeks. Improvement was gradual and permanent,

Antifebrin .- Austin Flint (New York Med. Rec., Dec., 1888; and Practitioner, Feb., 1889, p. 131) records a case of very obstinate sciatica cured by antifebrin in large doses. The patient, a man of twenty-five, had suffered from sciatica for more than a year; and although some degree of improvement had resulted from treatment, he had never entirely lost pain. For three weeks before coming under Dr. Flint's care the pain had become greatly increased in severity. He was treated with blisters, iodine, and many internal remedies. Electricity and sulphur were applied, and the nerve was stretched by forcible flexion of the thigh under ether, but all was of no avail. Then 20 grains of antifebrin were given, followed in two hours by 15 grains, and again in two hours more by another 15 grains, making in all 50 grains in four hours. As might be expected, the patient became cyanotic, and half an ounce of whisky was given with the last dose. Two days afterwards the pain was nearly but not entirely relieved, and the antifebrin was given again in the following way:—At 10 a.m. 20 grains, and 12 noon 20 grains, making 40 grains in two hours, and this time there was no cyanosis, and no whisky was required. The pain absolutely disappeared, and has not returned.

[A great practical difficulty in the treatment of sciatica is to persuade the patient to submit to thorough methods of treatment in the early stages of this malady. He nearly always hopes that the attack will not be a severe one, and so goes on with what are but temporising remedies, until the disease has become chronic. I think this explains the obstinate nature of many sciaticas which

are met with. -R. M.]

5. Gout.

At the Wiesbaden Congress of April, 1889, Ebstein (Ctlblt. f. klin. Medic., Special Report, p. 15) gave a summary of his views upon the pathogenesis of gout. He believes that there are two kinds of gout-(1) primary articular gout, and (2) primary renal gout. Both forms may lead to secondary affections in other organs, but this takes place specially in the primary articular form, which may indeed cause also secondary affection of the kidneys. The primary articular gout is an essentially chronic affection, which causes as its acute manifestation the typical gouty paroxysm. Ebstein opposes Garrod's view that the gouty attack is produced by the irritation of a unate deposit. He believes rather that gout is a chemical poison, which brings about not only inflammatory but also necrotic processes, and it is only in the latter cases that a deposit of crystalline urates is found. Severe gouty affections of the tissues and organs may thus occur without any deposit of urate crystals, for the gout would act as a chemical poison, causing temporary disturbances which would pass away, leaving no trace behind. Ebstein also opposes Garrod's view that inability of the kidneys to get rid of the excess of uric acid is at the bottom of the gouty diathesis. This would, according to Ebstein, lead only to his renal gout. To explain the symptoms and anatomical changes of primary articular gout he suggests that there is a local uric acid congestion. Uric acid, according to him, is formed in the marrow of bones, and in the muscles, and is carried off by the lymphatics, and enters the blood. It may be altered in the system, or may be eliminated by the

and seys. Where however, the progress of the uric acid through the lymphetics and capillaries is hindered, it produces its poisoned serile its. As regards the treatment of gout, Ebstein puts an analysment of the diet and the manner of life in the first place, and generally repeats the remarks he published in 1885 in his most on gent.

Pfeiffer, of Wiesladen, at the same Congress also gave his iew upon the nature and treatment of gout. He lays great to expon the affection of the skin in gout, and considers that it is one of the most important components of the gouty attack. He believes also that the skin over a joint may be inflamed without the articulation itself being in any way affected. Pfeiffer is not in complete accordance with Ebstein as to his views on the pathology of gout. The necrosis which undoubtedly to a certain extent accompanies the formation of tophi is, according to him, always of traumatic origin, the tissues in the gouty state being always hable to injury.

Picifler, moreover, endeavours to show that an excessive tormation of uric acid is not an es ential feature of gout; and that the gouty patient, in the intervals of his attacks, when he is apparently quite well, excretes less uric acid than an ordinary per on. The author, too, insists that it is not a deposit of in oluble mates which calls forth the gouty attack, but the procued of unic acid in a soluble form. During or preceding the attacl the alkalescence of the blood is increased, and so it di olve, out the urates which were formerly present in the to an , and thus presents the poison in an active form. The conty diathers, according to Pfeiffer, would consist in this -that the arreacid formed in the body is produced in an insoluble form. It therefore cannot be eliminated by the ordinary channels, but a deposited in the treates. The cause of this insolubility is, in the an hereditary disposition; and, secondly, a food contamine many acids, since these combine with the salts of the all alrest and alkaline earths, which would otherwise unite with the are send of the organism. It is upon this view of the perhology of court that Pfeiffer bases his treatment. Its objects are to increase the exerction of uric acid to the normal, to doming hithe pain of the attacks, and to remove the excess of uric and from the transcript a painless manner. The diet is most important. Preffer considers that this should consist of albumonors matter, but and vegetables; while carbo-hydrates, and e perfetty starch and agai, are to be forbidden. He maintains that a meat diet does no harm. Eggs may be allowed, but not mall once three contains factic acid. Wine and beer are to be

avoided. Mineral waters are very beneficial, and especially those which contain carbonates of soda. The salts of potash, lime, and lithia, act similarly, but those of magnesia in a less degree. Lithia salts, according to Pfeiffer, have no specific action. A course of the Wiesbaden baths would appear, from his experiments, to be specially beneficial in the uric acid diathesis, but it is also of use in removing the remains of acute or subacute attacks from the system. Each bath should be of half an hour's duration, and the water of a temperature of 27° R. (= 93° Fahr.). They should be repeated every day for 20 days; also regular exercise must be taken. During the gouty attack salicylate of soda and the mineral waters are the best remedies, since these increase the excretion of uric acid. Only after these have failed to relieve the pain should colchicum and Laville's liquor be used. The patient, too, should at once be put to bed, so as to avoid movements of the joint.

Julius Pollock (Lancet, Nov. 10, 1888) considers the treatment of gout under two headings—(1) treatment during the paroxysms,

and (2) treatment during the intervals.

During the paroxysms of acute gout, rest of the affected part is essential; it is also well to keep it warm. Local pain may be relieved by hot alkaline lotions, or by the application of glycerine and belladonna. Colchicum may be given during the early stages—at first a few large doses, and later smaller ones at regular in-

tervals. Alkaline diuretics are of great service.

The diet should be restricted to milk and slops, and the use of alcohol discouraged. When the disease becomes more chronic, colchicum is less serviceable, and is often better not given. Quinine in large doses, colocynth, guaiacum, iodide of potassium, and salicylate of soda, have all been used, with more or less success. A mercurial purge may be useful at the commencement of an attack. Sedatives are to be deprecated in gout, but if necessary hyoscyamus is the least objectionable. Irregular gout will require special treatment, according to the part affected.

Treatment during the intervals is of the highest importance. In young and strong subjects simple living, abstinence from alcohol, plenty of exercise, and avoidance of excesses, are sufficient. In the old and infirm the case is different; moderate exercise, avoidance of fatigue, and light food, are essential, and a little alcohol is frequently beneficial. Light vegetable tonics are sometimes useful, especially when combined with alkalies. After an attack a holiday and change of air are most desirable.

[Many of the objections to the use of colchicum in gout are founded upon errors in the method of its administration. The remarks of Dr. Pollock upon this point are very true, and will form a good guide to treatment. Colchicum stands in much the same relationship to gout that the salicylates do to rheumatism. It may have some influence in assisting the elimination of uric acid, but its main practical use is to relieve pain; and when it has done this, it is better to cease its administration, and have recourse to less depressing remedies. A well-known risk in the use of colchicum is that the patient, having at hand a remedy potent to relieve his pain, takes no care to arrange his mode of life so as to avoid further attacks,—R. M.]

6. The gouty diathesis.

Solis-Cohen (Medical News, May 18, 1889).—Regarding the gouty diathesis as being, not a disease, but, so to speak, an abnormal normality, i.e., an inherent departure of the individual organism from the typical action of like organisms, Dr. Cohen insists that treatment, to be effectual, must be permanent. To sum up the rationale of treatment in a few words, he advises, firstly, that we "alter our patient's mode of life to harmonise with the impaired structure that he has inherited;" and, secondly, that we "endeavour to secure the prompt elimination of the excess of uric acid, whose formation we cannot altogether prevent, and also to check the excessive waste of phosphates and repair their loss." The absolute quantity of food taken must not exceed the quantity necessary for nutrition. Meat should be used but sparingly, and in its more digestible forms; and the consumption of carbohydrates should not be excessive. Fruits if not too acid, and if they agree with the patient, should be used freely. Fat should be taken in moderate amount. Fluids, especially water, should be freely administered; and milk may be used to replace a portion, not all, of the meat required. When patients evince dislike for water, alkalies may be used, not abused; amongst them he finds the combination of the citrates of lithia and potash most valuable. Malt liquors and sweet wines must be absolutely prohibited, and the use of even the less harmful alcoholic beverages is to be deprecated. Exercise, appropriate in quantity and quality, should be definitely, not vaguely, advised. The skin should be kept active, either by warm or cold baths, according to the idiosyncrasy of the individual patient. The intestinal functions must be kept at a proper pitch of activity, both by digestive adjuvants and by the occasional, not habitual, use of laxatives. Amongst the former remedies small doses of phosphoric or nitric acids freely diluted, and administered before meals, are valuable; and amongst the latter, Rochelle salts are the least objectionable. The inhalation of compressed air or of oxygen may be appropriately employed at

times, but this measure must not replace the open-air exercise which is so necessary.

7. The influence of phosphate of soda on the excretion of uric acid.

Haig (Brit. Med. Journ., 1889, ii., p. 1,227) in a paper read before the Royal Medical and Chirurgical Society remarked upon the power of phosphate of soda, taken internally, to increase the excretion of uric acid, and showed that this action could be greatly interfered with by impurity of the salt. Much of the phosphate of soda which is sold contains a small percentage of sulphate of soda, and the mixture not only causes no increase in the excretion of uric acid, but even produces marked pains in the joints. Again, the admixture of a little dilute phosphoric acid with the pure phosphate in solution stopped the action of the salt in increasing uric acid excretion, but the addition of a little bicarbonate of soda had an opposite effect. Dr. Haig suggested that it was shown by these experiments that probably the phosphoric acid and the sulphate of soda converted the phosphate of soda (Na, HPO4) into the acid phosphate (NaH, PO4). The same change may take place during the process of crystallisation, but the addition of a small quantity of bicarbonate of soda was sufficient to insure the proper therapeutic effect. Dr. Haig thought the phosphate was not likely to be of use in acute gout, because the acidity in this disease was very high; but it was of considerable value in the mental depression of uric acid in which the acidity was low and falling.

8. Test of the gouty state.

Pfeiffer insists upon the necessity of distinguishing between the presence of uric acid in the urine in the combined and uncombined states. Schetelig, of Homburg (Brit. Med. Journ., 1889, i., p. 1,227), described before the Royal Medical and Chirurgical Society the method by which Pfeiffer makes this distinction. The whole quantity of uric acid in the urine is first estimated, and then an equal portion of urine is allowed to pass through a filter charged with uric acid, "the lithic filter." The uric acid in the filter has the power of attracting to itself the free uric acid of the urine, while it allows the urates to pass through unchanged. If the uric acid in the urine be estimated after the filtration, the difference between this and the total estimation of uric acid before filtration will give the amount of free uric acid originally present. It is only this free crystalline uric acid which is indicative of the gouty state. By this test, genuine could be distinguished from spurious gout, and the former could be keyt.

in check for a while by baths and alkaline waters, but would in most cases recur.

[This test has not yet received any confirmation. It is especially desirable that we should have a ready means of distinguishing between free and combined uric acid in the urine. Sir William Roberts has shown me that the uric acid filter has certainly a considerable power of removing uric acid from urine, but its method of action is obscure. It remains to be seen whether other, and chemically inert, substances do not act in the same way. Moreover, given that the test is reliable as far as its power for detecting free uric acid is concerned, the author assumes too much when he at once considers it a reliable test of the gouty diathesis.—R. M.]

9. The mineral waters of Bath.

Craddock, in a paper read before the Bath and Bristol branch of the British Medical Association, discusses the effects of the Bath waters on various diseases, and arrives at the following conclusions:—

(1), That the diseases in which the Bath waters are of use are exceedingly limited in number. (2), The value of these waters is much increased when used in conjunction with appropriate medicines. (3), Gout in all its phases is the one disease in which their action may be considered specific. (4), In chronic muscular rheumatism the excellent bathing arrangements are of much value. (5), In rheumatoid arthritis great care should be taken in the selection of cases, whilst those of a decided neurotic origin should be positively excluded.

[Attention has been directed in recent years to the development of the watering-places of England, and a further impetus will be given by the appointment of a committee of the Royal Medical and Chirurgical Society to investigate this subject. The arrangements for bathing, etc., at Bath are now most admirable, and even luxurious.—R. M.]

MEDICAL DISEASES OF CHILDREN.

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1. Antipyretics.

E. Kahn (Jahrb. f. Kind., 1888, t. 38, heft 3 and 4) has experimented with benzanilid (C⁶H.⁵ N.H. CO C⁶ H.⁵) which has benzoic acid for its radical, in the same way as acetanilide has acetic acid. It is a white crystalline powder analogous to antifebrin (acetanilide), very little soluble in water. The author has used it in typhoid fever, meningitis, phthisis, pneumonia, and bronchitis. It is a powerful antipyretic, more like antifebrin, but the defervescence is longer. There is, as with the better-known drug, abundant perspiration, but it is less sudden in appearance. Cyanosis was never observed, but in one case a fleeting erythema in large red blotches appeared. The stomach and intestine tolerate it well. From one to three years, 10 to 20 centigrammes may be given; from four to eight, 20 to 40; and older children may have as much as 60 centigrammes.

2. Acetanilide.

J. N. Love (Arch. of Ped., 1889) gives the result of the use of this drug for a year. He speaks well of it for scarlatina, measles, congestive fevers, whooping cough, convulsions, chorea.

He sums up in these conclusions :-

Carefully guarded and properly used it is a safe and reliable remedy. It is preferable to antipyrin, the result secured being more enduring and the depression less. Cyanosis, if it occurs, is not accompanied by danger, and soon passes off. It is best used for antipyretic purposes in medium doses, to the extent of keeping down the temperature to a reasonable point. It is better to give small doses frequently repeated, than large ones at longer intervals. It is of great value in controlling the temperature in fever of all kinds. It is almost a specific in pertussis—not in aborting the disease but in controlling it. It is safer than antipyrin.

3. Ague.

M. Clemente Ferreira (Rev. Mens. des Mal. de l'Enf., 1889) has a long and valuable article on this subject. He points out, as is well known, that the three characteristic stages may all be absent, and the shivering stage represented by cyanosis of face or extremities. The periodic nature of the attacks is neither so pronounced nor so regular; of the several types of fever the intermittent type is less frequent, the remittent more so than in adults. The subcontinued type is also frequent, as is also one that is best called the indefinite type. There is also a latent type, in which there is no fever at all. There is seldom any swelling of the liver or spleen, although the author has sometimes met with cirrhosis of the liver. The following types are to be seen in childhood:—(1). The thoracic, where the disease shows itself as a bronchitis, an asthma, or a broncho-pneumonia. (2). Gastric, characterised by a coated tongue, vomiting, nausea, (3). Intestinal, by catarrh of the duodenum and anorexia. the small intestine, sometimes of the biliary passages, associated with constipation or diarrhea. (4). The cerebral, comprising the eclamptic, the comatose, the delirious, and the meningitic (5). The renal form, in which the symptoms are varieties. those of nephritis. The cerebral forms are worthy of special attention, particularly when attended by coma, because they are liable to end fatally, unless the diagnosis be well timed and the treatment by large doses of quinine prompt. The author also asserts that malarial poisoning may show itself, as in adults, by neuralgia, and he particularly indicates an otalgia, facial or intercostal neuralgia, pains in the extremities, and severe attacks of colic. In the treatment of all such the old remedy, quinine, still holds the field, and infants tolerate even large doses. The author has given a gramme and more to an infant under a venr without observing the least inconvenience. Moncorvo speaks in the same sense. But while the organism is tolerant the stomach is often not so, when it must be disguised or injected subcutaneously or given by the rectum; but the latter method is never tolerated long. The author usually employs the hydrochlorate, the hydrobromate, or the bisulphate. When quinine fails the "hydrochlorate of pereirine" (Bull. de Thérap.) may be given without hesitation. It ought to be given in doses of 2 or 3 grammes, and three hours before the presumed time of onset of the paroxysm. It may be dissolved in syrup of orange, adding a little alcohol.

4. Croup.

Lewentauer (Centralbl. f. klin. Med., 1889, No. 8) reports two cases of idiopathic croup in which the oil of turpentine

administered internally, and also by inhalation, gave good results. The first case, a boy of two years old, some days ill and with all the signs of extreme laryngeal obstruction, was ordered a tablespoonful of oil of turpentine, and ice compresses to the neck. Next day he was distinctly better, and after taking another teaspoonful he expectorated a mass of false membrane.

The drug was now given in a mixture :-

Oil of turpentin		200		217		grammes.
Oil of sweet alm	nonds	***		1001		grammes,
Simple syrup	***	141				grammes.
Mucilage	***	133+	***	444	40	grammes.
The yolk of one						
Aromatic water		244	***	111		grammes.
	A teast	poonful	every	two hor	ITS.	

In the second case, a boy of four years old, ill eight days, the turpentine was administered by teaspoonfuls, and he was constantly vaporised with the following :-

Oil of turpe	entine, t	incture	of eu	calyptus	and	carbolic	acid	āā 4	grammes.
Alcohol		100			***	144-			grammes,
Water	200	1000	200	200	260	***	***	1000	grammes,

After the first dose or two of the remedy, the child was seized with violent cough, followed by an abundant expectoration of false membrane, and at the end of three days he was convalescent.

5. Scarlatina maligna. Shakowski (abstract in Rev. Mens. des Mal. de l'Enf., June, 1889) has given salicylic acid to 125 children with great success, the mortality being 3.5 per cent. The formula was :-

Salicylic soid			1000	1 gramme.
Aq. destill	-		11-	75 grammes,
Syrup of orange-peel		250		30 grammes.

A teaspoonful every hour during the day, and every two hours during

The temperature falls rapidly under this treatment, and usually all febrile reaction has gone by the tenth day. But the drug should be continued during some time in progressively decreasing doses to prevent relapse.

6. Diphtheritic paralysis, etc.
Ziemssen (Klinische Vorträge, No. 6; Medicin. Chirurg. Rundschau, 1889, No. 5; Rev. Mens. des Mal. de l'Enf., May, 1889) takes
the view that this affection is a multiple neuritis. And as regards the treatment of grave cases he recommends the internal administration of sulphate of strychnine in doses of from 5 milligrammes to 1 centigramme in the day; and, if paralysis of the

heart threatens, subcutaneous injection of camphor gives excellent results.

Naunyn (Medicin. Chirurg. Rundschau, 1889, No. 4) advocates the subcutaneous injection of strychnine in various forms of paralysis and particularly in that following diphtheria. The injection should be made near the paralysed part, and in doses commencing at three or tive milligrammes, the dose being gradually but regularly increased up to a centigramme, and the treatment being interrupted for six or eight days after every course of ten or twelve days. The bad results most frequently met with are a painful sensation of muscular tension (1 cramp), mental excitement, and vomiting. Children are particularly liable to these effects, and the drug must, therefore, be administered with great precautions.

7. Pertussis.

Rothe (Memorabilien, 1889, 6) speaks favourably of a mixture of carbolic acid and iodine. The chief ingredients of his formula are carbolic acid and alcohol, of each one gramme; tincture of belladonna, thirty drops; tincture of iodine, ten drops; in a two-ounce mixture. A teaspoonful to children from two to twelve years, every two hours, and the medicine is continued until the cough becomes less frequent and less intense—a period usually of two to three weeks. The author never administers antipyrin for fear of intoxication, so frequent at this period of life. Iodised phenol, on the other hand, may be given without interruptions for two or three weeks without any ill effect.

Leubuscher (Centralbl. f. klin. Medicin, 1889, No. 7) has made trial of antipyrin, antifebrin, and phenacetin. As regards antipyrin he has carried out in the main the rules prescribed by Sonnenberger-i.e., in the twenty-four hours three or four doses are given, as many decigrammes as the child counts years, or as many centigrammes as months. The results also agree with those of Sonnenberger, although the value of the drug, he thinks. It curtails the cough and has been somewhat over-estimated. also the duration of the malady, but it does not arrest it altogether, and unless it be employed at the outset it is no better than many Bad effects were limited to a single case of other drugs. generalised erythema in a boy of eight years. Antifebrin, considered of small value by Sonnenberger, has given fairly good results; but this drug is liable to produce cyanosis, cardiac depression, and collapse, if persisted in too much. Phenacetin the author considers of no use at all.

Bachel (Arch. of Pediat., March, 1889) advocates the use of chloride of gold and sodium for internal administration. He has

used it for two or three years, either alone or in combination with opium. A two per cent. solution of the chloride is used, and five to eight drops are given in water every two hours. The number and duration of the paroxysms should soon be reduced. If not, the dose may be cautiously increased. The author has given as much as fifteen drops of the two per cent. solution every two hours. The addition of a few drops of tincture of opium to each dose of the chloride will be of service if there be sleeplessness or pain from pneumonia,

S. Asthma.

Moncorvo, of Rio de Janeiro, has published a volume on this disease as it is seen in childhood (Bibliographical notice in the Rev. des Mal. del Enf., June, 1889). The author considers, as most recent authorities have done, that the disease is one of the nervous system, and that it owes its origin to irritation, either central or peripheral, of the vagus. He describes two forms: one in which the onset is quite sudden; the other initiated by bronchial catarrh—the latter the more common, and its true nature easily overlooked. The author has obtained specially good results from the tincture of lobelia, eight, ten, twelve, and even fifteen grammes having been given. He also speaks well of pyridine inhalations, five drops on a handkerchief worn in front of the chest, and replenished four or five times in the day.

Descroizilles (Rev. Mens. des Mal. de l'Enf., August, 1889) has an article on the same subject. Two cases are detailed in which a combination of tincture of lobelia and iodide of potassium produced markedly good effects. In each case one gramme of the iodide and five grammes of the tincture of lobelia were taken daily.

9. Bronchitis.

Descroizilles (Journal de Méd., Dec., 1888) recommends terpine in place of turpentine; it is much less disagreeable. It may be given in doses of fifty to sixty centigrammes daily to children of six and eight years in the form of elixir.

10. Cancrum oris.

Three striking cases of successful treatment by the local application of perchloride of mercury have been published by Drs. Yates and E. C. Kingsford (Lancet, vol. i., 1889, p. 880). The sloughs were removed, and the surface then treated with a 1 in 500 solution of the perchloride, the parts being dressed with lint soaked in a 1 in 1,000 solution of the same.

11. Gastro-intestinal derangement.

W. L. Carr (Archives of Pediatrics, Sept., 1889) writes on the value of salol in the gastro-intestinal derangement of children. Salicylate of phenol or salol has an aromatic odour, but no taste.

It is insoluble in water, soluble in alcohol, and slightly soluble in all organic fluids of an alkaline reaction. The author has administered it to thirty-five children, but unfortunately these were out-patients, so that no exact return can be made of them. It has been used in all the disorders of the stomach and intestines common to children, but with the most success in the acute gastro-enteritis of improper diet or of temperature changes. It is of little use in serous diarrhea, nor does it avail to relieve the tenesmus and bloody evacuations of dysentery. The dose depends upon the requirements of the case. Under six months a dose of half a grain three or four times at two-hour intervals suffices: between six months and eighteen months, & gr. to 14 grain; at two years, 11 to 2 grains. It never, in the writer's experience, caused toxic or irritative symptoms.

As a general conclusion, it is safe, easily administered, and useful in the first stage of acute gastro-enteritis, and in the more chronic form of enterocolitis, accompanied by strong, bad-smelling evacuations—that is to say, in morbid states due to fermentation

in the stomach and upper bowel.

Dr. Leo (Therapeutische Monatshefte, 1889, 5) speaks favourably of washing out the stomach in infants. He gives the results of 104 cases. He uses pure water, or water to which a little thymol has been added. The most favourable results have been obtained in dyspepsia, with or without vomiting, accompanied by diarrhea or constipation. It was not uncommon to cure patients by a single operation. In cholera the results were not striking. The author thinks that the treatment is not only valuable in relieving the stomach of irritating substances, but also for stimulating the muscular movement of the organ-often much weakened.

Seibert (Arch. of Pediatrics, April, 1889) has also practised it with great advantage. He uses only plain warm water, which is allowed to flow into the stomach through a soft tube from a

cistern suspended near.

Reimschneider (Jahrb. f. Kinderh., 29, 1) gives the results in 140 cases. An irrigation with plain water was followed by irrigation with a 3 per cent. solution of benzoate of soda, a portion of this being allowed to remain in the stomach. This seemed to be particularly valuable in acute catarrh of the small intestines, the diet being adapted to the case. A fairly favourable result was obtained in eighty-nine cases; in thirty-one the result was good but less speedy, and in twenty death occurred.

12. Infantile diarrhea.

Emmett Holt ("The Prevention of Summer Diarrhea among

Infants, Viewed in the Light of the Lesions," Medical News, Feb. 23, 1889) first establishes the fact that in his experience diarrheal diseases are associated with distinct lesions. Of fifty-seven such autopsies he had made, follicular ulceration existed in 19—or 33 per cent., and in almost every case the solitary follicles were very much enlarged. These cases presented clinically about all the types met with, and since they were, with but few exceptions, taken consecutively in an institution where all fatal cases come to an autopsy, they may be assumed to represent

fairly the frequency of the different lesions.

This being so, successful treatment must be preventive. The author has been collecting data regarding the proper amount of food for infants who are artificially fed at the different periods of their existence. And enough has been learned to show that the figures given in most of our books are altogether too large, and that the majority of hand-fed infants are very greatly overfed. His conclusions are as follows :- children should never be overfed, and especially not in summer. At this season every dyspeptic catarrh should be attended to; many being promptly curable by cutting down the quantity of food and clearing out the intestine. Should even a very mild intestinal catarrh continue for two or three weeks there is something more than functional disorder. Every mild catarrh is a possible precursor of a severe type of intestinal disease. In another paper ("The Relation of Bacteria to the Diarrhœal Diseases of Infancy," New York Medical Journal, April 13, 1889) these affections are traced back to the growth of bacteria, which flourish under the circumstances of the abnormal conditions which are engendered by unwholesome or too plenteous food. Therefore, all germs are to be excluded (1), by sterilising the milk for all children under two years of age, by absolute cleanliness of all food utensils, by pure air, by keeping the child's mouth clean; (2), by securing a soil unfavourable to the growth of germs. This means to build up the constitution; to give food suited to the powers of the digestive organs; to be regular in the matter of feeding; to examine the evacuations, that the food given may be known to have been absorbed; and that during the summer season the amount of food should be materially reduced, and the infant allowed to drink water freely.

13. Dysentery.

Jacobi has a valuable article ("Therapeutics of Infancy and Childhood," Archives of Pediatrics, January, 1889) on the treatment of dysentery. A brisk purgative—castor oil or calomel—ought to precede any other treatment. The food must be liquid.

Local heat or hypogastric pain will be alleviated by the careful application of ice. But this requires caution, and quite often warm applications prove more efficient. Bismuth subnitrate and subcarbonate both cover and protect the mucous surface and check fermentative action. Bismuth seldom fails if given in sufficient doses (3j or 3jss daily). The passages should be examined for their reaction. Abundant acid requires the administration of alkalies, carbonate of lime being the best, but salicylate of sodium may sometimes be added, and salol 1 or 2 grains, or resorcin \(\frac{1}{4}\) to \(\frac{1}{2}\) grain, may take its place.

Napthalin is also of value as an antiseptic (\frac{1}{2} to 2 or 3 grains every two or three hours in mucilage), and of opiates the author prefers the tincture, or wine, or opium in substance, or. Dover's

powder.

The temperature will rarely be so high as to require antipyretic medicines; frequent enemata will often reduce it effectively. Very young children may demand an occasional dose of antipyrin or acetanilide when the heat threatens either nervous system or the normal structure of the tissues of the body.

The local treatment of chronic dysenteric ulcerations requires the use of enemata. These may be either to evacuate the bowels; to reduce the irritability of the intestine; or to accomplish actual cure. The nature, quantity, and temperature of the liquid depend on the end aimed at, and in part on the irritability of the individual reaction. Sometimes small amounts are objected to, large quantities tolerated easily. Tepid injections usually answer best. For evacuation a simple water enema is the best; for alleviating distress and tenesmus, thin mucilage, or starch water, or flax-seed tea, are very comforting. Glycerine alone, or but little diluted, "irritates, nay, cauterises." Of astringents the author prefers a 1 per cent. solution of alumina or tannin. Creasote in 1 or 1 per cent. solution is useful, so also is carbolic acid, same strength, but dangerous. Nitrate of silver may be useful in cases not quite acute in 1 or 2 per cent. solutions, bowel should be washed out with warm water first, and the injection neutralised after with solution of chloride of sodium. The author has been very successful with injections of subnitrate of bismuth-the drug is mixed with six to ten times its amount of water, and I to 3 ounces of this mixture are injected into the bowel, which has been washed out first, twice or three times daily. A large part of the injected mixture is soon expelled, but the result is, nevertheless, satisfactory.

14. Cholera infantum.

Dr. Weis (Wiener Med. Presse, 1888, 44-46) recommends

subcutaneous injections of chloride of sodium—30 to 35 grammes had a markedly restorative action in a case of collapse in the course of cholera; but the injection should be practised before the collapse has assumed any extreme degree, and repeated whenever the phenomena of depression show themselves.

15. Constipation.

Dr. G. A. Carpenter (Lancet, vol. ii., 1888) gives his experience on glycerine enemata derived from the Evelina Hospital. Two hundred and fourteen injections were given to sixty-three children. A drachm was given in 156 cases; one drachm and a half in 48; and two drachms or more in only nine. In ten only did the enema fail to act. In no instance were there any unpleasant symptoms. Ninety-five injections produced an evacuation within five minutes, ninety within thirty minutes. Glycerine enemata are easy of application, unattended by pain, quick and natural in action.

[Jacobi ("Therapeutics of Infancy," etc., Archives of Pediatrics, 1889) speaks much less warmly in praise of the measure, but I

agree with Dr. Carpenter .- J. F. G.]

16. Icterus.

E. Kraus (Archiv f. Kinderheilk., t. x., h. iv.) has employed the faradic current in the treatment of catarrhal jaundice in children. Seventeen cases have been treated by this means, with very satisfactory results. One electrode is placed over the region of the gall bladder, the other behind, in horizontal line to the right of the spine, or the two electrodes were placed side by side over the gall bladder. This once a day, for five minutes. Appreciable results were obtained at the end of five or six applications.

17. Convulsions.

H. V. Kraggs (Archives of Pediatrics, 1889) advocates the use of sulphide of calcium in infantile convulsions and other nervous diseases. This drug can never take the place of chloral or bromide, which are so valuable in many of the slighter neurotic affections. There are, however, a number of the severer forms of these for which sulphide of calcium, in most instances, not only adequately controls the convulsive movements, but is curative in its action. The best results obtained by its use are in convulsions during dentition, falls on the head, meningitis, and acute tuberculosis. It is a powerful remedy, so the dose must be small—under six months, a grain in half-a-pint of water and a teaspoonful hourly is the best prescription. Less caution is required in children above a year old. The dose varies from \(\frac{1}{2} \) to \(\frac{1}{20} \) grain every hour, or less frequently, according to the severity

of the case. Antipyrin may sometimes be alternated with the sulphide with advantage.

18. Recurrent headache.

Russell Sturgis (Arch. of Pediat., 1889) does not agree that this affection is either migranous or choreic, as has been suggested; nor has he met with any success by practising the general methods of relief employed for headache. At last he betook himself to the hypothesis of Reymond and Möllendorf, that the pain is due to excitement of the terminal sensory filaments of the fifth pair, by dilatation of the capillary blood-vessels of the dura mater: and, thinking thus, he tried ergot for its effect on the arterioles. The results on the whole have been satisfactory. If after examination none of the usual causes of headache can be detected, ten drops of the fluid extract of ergot are prescribed, generally alone, sometimes with iron, and persevered with for two weeks after the subsidence of the headache.

19. Laryngismus stridulus.

Percival (Lancet, vol. ii., 1888) reports the use of antipyrin in twenty-four cases. The first case—a child of eighteen months was given two grains every hour; dyspnæa soon ceased, and the child fell asleep. The same dose was then continued every two hours. In some cases the dose had to be increased-in older children and with severe paroxysms the maximum dose was five grains.

20. Chronic hydrocephalus: On the value of aspiration in.

C. Pfeiffer (Wiener Med. Presse, 1888, 44). The chief dangers are considered to be local infection-which can be easily avoided by careful antiseptic methods, and the entry of air into the cranium, which is best avoided by manual compression of the skull during the operation, or by the employment of Mosler's special apparatus described so long ago as 1867. The author has not found the measure of much use; nevertheless, he does not absolutely reject it in the face of recorded cases of success, and he thinks that, even if the effect be but transitory, it may not be unimportant in facilitating for a time the development of the nervous centres. It is also a justifiable proceeding when intense convulsions or other phenomena of cerebral pressure set in in the course of hydrocephalus.

21. Wasting diseases.

O. Hauser (Zeitsch. f. kl. Med., t. xix., h. 5 and 6) writes on the therapeutic value of lipanin, the observations being carried out in the clinique of Prof. Koht. It was given to thirty-eight children, their ages varying from fifteen months to fourteen years.

The diseases for which it was given were anamia, chorea, chronic rheumatism, tuberculosis, and in convalescence from acute maladies, such as febrile affections. All the patients preferred it to cod-liver oil. In all, with a single exception, it caused a marked acceleration of the pulse, and particularly so in the anamic, the rachitic, and the chronic. It can be mixed with various medicaments, or incorporated with sauce or salad. Several patients in whom cod-liver oil caused digestive disturbance, took it well. For the most part, it exercises a peculiarly favourable action on the nutrition and general condition, and particularly so in chronic phthisis. For children under six years, half to one teaspoonful three times a day; for those older, this dose may be doubled. It is well to commence with a small dose and increase it, and it may even be given during the summer season.

Mr. Martindale has kindly procured for me this further information about lipanin: "It is a German proprietary preparation consisting of olive or cotton-seed oil containing added free fat acid. It is alleged that the special therapeutic property of cod-liver oil is due to the free fatty acid contained in it. The subject is referred to in the *Pharmaceutical Journal*, September 1, 1888, p. 163, and the above assumption is disposed of."

22. Tuberculosis.

Jacobi (Deut. Med. Zeit., 1889, 27) advocates the use of arsenic and digitalis. Even in early childhood, two drops of Fowler's solution can be given daily for weeks or months. This dose is diluted sufficiently and given in divided doses three times in the day after meals. When symptoms of saturation appear, a break is made, and, to increase the tolerance of the drug, it is well to give small doses of opium with it. Digitalis is almost as beneficial as arsenic. This drug by reinvigorating the cardiac muscle, quickens up the action of the viscera, and the general nutrition in consequence. The author recommends the fluid extract.

23. Cardiac diseases.

Strophanthus.—Demme ("The Administration of Strophanthus in Childhood," Allgemeine Med. Central. Zeit., 1888, 103) comes to the following conclusions:—It can be given to children from the age of five years. In exceptional cases only is it followed by dyspeptic symptoms. It should not be given in larger doses than three drops of the tincture four or five times a day, because it is liable to produce sudden and unexpected cardiac paralysis. Its predominant action is diuretic; this is followed by a diminution of the venous stasis. The effect is produced by increase of the arterial pressure, so that in those affections where this is already

present the diuretic action fails. It acts markedly in the relief of dyspnœa, and this effect is to be observed in chronic nephritis as well as in bronchial asthma and whooping-cough. Its action in this regard is probably also by increasing the arterial pressure. Although there exist strong analogies between the effects of strophanthus and those of digitalis, nevertheless each drug has its own proper action. Digitalis is indicated if it be necessary to obtain a rapid compensation of valvular lesions as well as increase of blood-pressure with slowing of the pulse and diuresis; and if in such a case digitalis fails, so also is strophanthus likely to do. On the other hand, when, after the administration of digitalis a valvular lesion is compensated, and it is necessary, in consequence of the exhaustion of the action of that drug, to act anew upon the heart, in order to obtain further increase of bloodpressure and its consecutive diuresis, when, also, dyspnora occupies a position of primary importance, then strophanthus will give particularly satisfactory results. In cases of this sort the combined action of the two drugs will be especially called for. The author has not noticed in any case either any cumulative action of the remedy or weakening of its effect.

24. Anæmia.

Dr. M. Weis (Wien. Med. Presse, 1888, 44-46) advocates the subcutaneous injection of chloride of sodium in acute anemia and infantile cholera. These injections constitute a mode of treatment easy of application and of absolute harmlessness, if practised with antiseptic precautions. The results are particularly remarkable in acute anemia. In all cases in which intravenous injection is contra-indicated, subcutaneous injection may be substituted. The quantity of liquid to be injected must be determined for each case. The liquid consists of 0-6 per cent. solution of chloride of sodium, to which is added a little alcohol or rum. For chlorosis the quantity injected need not exceed 25 grammes, nor ought it to be large in anemia consequent upon hemorrhage, lest the sudden increase of work should prove too much for the degenerate muscle of the heart.

25. Umbilical hæmorrhage in infants.

Dakin (Lancet, vol. i., 1889) advocates underrunning the vessels with a hare-lip pin or long needle. The child is placed on its back, its thighs flexed. In the interval of taking breath, when the abdominal muscles are lax, an inch of the abdominal wall, exactly at the level of the lower edge of the umbilicus, is pinched up tightly between the finger and thumb. The umbilical arteries can be easily felt in this fold, and the finger and thumb made to meet beneath them. The pin is passed underneath

them, and a figure-of-8 ligature may now, if necessary, be adjusted over it. The pin, etc., should be rendered antiseptic, as it passes into the peritoneal cavity for about one-sixteenth of an inch

26. Cocaine.

Dr. Moizard (Revue Mensuelle des Mal. de l'Enf., November, 1888) records a case of poisoning by this drug. Five grammes of a 20 per cent, solution of hydrochlorate of cocaine (25 centigrammes of cocaine) were given by mistake to a boy of four vears old. The immediate effect was nil. The child was put to bed and slept deeply; but about an hour afterwards it awoke suddenly in much distress. The face was pale, the eyes haggard, the respiration difficult, irregular, apnœie; there was nausea, profuse perspiration, violent pain in the chest, cramp in the extremities, and a formidable muscular agitation only to be compared to bad chorea, in which it tossed about from side to side, striking itself in all parts against the bars of its cot. The pupil was widely dilated, and the eyeballs oscillated with a pronounced nystagmus. The child responded to questions, at the same time that it suffered from a sort of frenzy, being a prey to hallucinations, seeing balls of fire and animals upon the bed. Sensibility was intact, the pulse very frequent. An emetic was given two hours after the injection of the poison, and an enema of 50 centigrammes of chloral hydrate; a second dose of 30 centigrammes was administered at the end of two hours, and by the end of five hours from the injection of the cocaine a little sleep had been obtained. The choreiform movements passed off slowly in the course of thirty-six hours.

27. New books.
The year 1889 has been unusually prolific in new books dealing with diseases of children. The first volume of Keating's "Cyclopædia of the Diseases of Children " has appeared. It is a bulky volume of nearly a thousand pages, and deals with general subjects, such as the Anatomy of Children, the Physiology of Infancy, Diagnosis, the Influence of Race and Nationality upon Disease, Practical Bacteriology, Maternal Impressions, Diseases of the Fœtus, Infant Feeding, Wet-nurses, Nursing Sick Children, Nursery Hygiene, Puberty. This section will show how complete the work is intended to be, and it may be added that the first volume is to be followed quickly by three or four others. This volume also deals with fevers and miasmatic diseases, embryology and the general therapeutics of childhood, and many of the articles are most elaborate. The work promises to be one of great practical value. Besides this, a new handbook on diseases of children, medical and

surgical, by Dr. Ashby and Mr. Wright, both of Manchester, has been published; it is founded upon the mature and extensive experience obtained at one of the best hospitals for sick children, in England, the one at Pendlebury near Manchester, and as such and from the pens of men who have been doing for years some of the best work in this speciality, it is a great addition to the literature of diseases of children. The New Sydenham Society has issued a first volume of the translation of Henoch's well-known work; Dr. John Thomson of Edinburgh has had the charge of the work, and there are few which can be more welcome to the student of pediatrics. Of smaller works may be mentioned "Hygiene of the Nursery," by Dr. Louis Starr of Philadelphia; it has reached a second edition, and is a little book full of useful information and practical hints. Dr. Osler of Philadelphia has published a small monograph on the "Cerebral Palsies of Children." which also is a useful addition to our knowledge of a hitherto not very generally considered subject. I would wish, too, before concluding this mention of some of the chief additions in the way of books, to call attention to the Archives of Pediatrics, which has now for several years been published under the able editorship of Dr. Perry Watson of New York (Lippincott, Philadelphia), and which is not, I think, so well known in Great Britain as it deserves to be. It is a monthly periodical, containing original articles and a very complete review of current literature, and it is well worthy of support. A small German publication of similar purport, the Centralblatt für Kinderheilkunde, edited by Dr. R. W. Raudnitz, of Prague, has, I regret to say, ceased to exist after a short existence, for it promised to be of much use to busy men.

Subjoined are some of the more important articles that have

been written during the year.

Cheadle on the Various Manifestations of the Rheumatic State as exemplified in Childhood and Early Life (Harveian Lectures Lancet, vol. i., 1889).

H. Le Grand, Study of a Case of Cholera Nostras in a Child of

Six Years (Rev. des Mal. de l'Enf., 1888).

V. Starck on the Position of the Apex of the Heart and the Percussion of the Heart in Children (Arch. f. Kinderheilkunde, t. ix. f. 4, 5).

8. Holgate Owen, The Prognosis of Mitral Disease in Children

(Medical Chronicle, Feb. and March, 1889).

Fervers on the Treatment of Whooping Cough with Quinine,

particularly by Injection (Jahrb. f. Kind., 28, 2).

Edwards on the Method of Nursing Sick Children (Arch. of Pediat., Feb., 1889).

Biedert on the Normal Digestion of Milk (Jahrb. f. Kind., 28, 3 & 4; abst. Arch. of Pediatrics, Feb., 1889).

Jacobi on the Therapeutics of Infancy and Childhood (Arch. of Pediat., 1889). A very valuable series of papers.

Townsend on Acute Lobar Pneumonia in Children (Arch. of Pediat., March, 1889).

Von Dusch, Croupous or Fibrinous Pneumonia (Jahrb. f. Kind., 28, 3 & 4).

Hellström, Croupous or Fibrinous Pneumonia (Jahrb. f. Kind., 29, 1).

Rotch, Notes on Infant Feeding (Arch. of Ped., 1889).

Forchheimer on Non-Surgical Diseases of the Mouth (Archives of Pediatrics, 1889).

8. S. Adams, The Relation of Dentition to Diseases of the Alimentary Tract (Archives of Ped., 1889).

Leuf, on the Physical Education of Children (Arch. of Ped., 1889).

Reimschneider, The Dietetic and Mechanical Treatment (washing out) of Gastro-intestinal Catarrh in Infants (Jahrb. f. Kinderh., 29, 1).

CONTINUED FEVERS.

By SIDNEY PHILLIPS, M.D., M.R.C.P.,

Assistant Physician to the London Fever Hospital, and Physician to Out-Patients, St. Mary's Hospital.

1. Phenacetin as an antipyretic.

Since the composition and action of this substance were described in the "Year-Book" for 1889, other reports of its effect have been published. Professor Guiseppe Cattani, of Milan, tried phenacetin in more than fifty cases, and had very favourable results. Drs. Musrachi and Rifat (Bull. Gén. de Thérap., June, 1888) also recommend the drug. Professor Rumpf, of Bonn (Berliner klin. Wochenschrift, No. 23, 1888) says that pure phenacetin in doses of fifteen grains is absolutely harmless, acts without nausea or vomiting, cyanosis, syncope, or other untoward symptom. The dose of fifteen grains reduces the temperature 3° to 5° Fahr. within two to four hours. In some cases the temperature falls below normal; and Rumpf advises that the dose should not exceed eight grains, though even with the large dose of forty-five grains no bad symptoms are produced except profuse perspiration. Dujardin. Beaumetz finds that no cyanosis is produced by it, as is the case with acetanilid; and, unlike the latter, the presence of it in the urine may be detected, ferric perchloride giving with it a red, and cupric sulphate a green, colour. Professor Lépine, of Lyons, agrees that phenacetin is a useful antipyretic in cases of typhoid.

Ayes (New York Med. Rec., May, 1889) also finds the action of phenacetin to be prompt and powerful, and the duration of its

effect to be four to six hours.

On the other hand, Dr. F. Humphreys (Therap. Gazette, July, 1888) find its action less prompt than that of antipyrin; and Dr. Guttman records a case where a severe chill succeeded its administration to a child.

In the Philadelph. Med. News, Sept. 1, 1888, a case is recorded in which phenacetin produced a rash on the arms and legs and, to a less extent, on the trunk, consisting of red spots or papules, and lasting twenty-four hours.

2. Pyrodin as an antipyretic.

The substance described under this name as an antipyretic by Dr. Dreschfeld (vide "Year-Book," 1889) has been since reported on by Dr. Guttman (Pharm. Centralbl., May 16, p. 311; May 30, p. 341). The pure substance has been introduced into Germany under the name of "hydracetin," and, according to Dr. Guttman, it exercises a powerfully antipyretic action in relatively small doses: the doses given ranged from one to five grains a day. One and a half grains is the dose recommended, but its internal administration must be cautiously conducted, and not be continuous.

Lépine (Lyon Médical, Dec. 9, 1888), who has also investigated the action of pyrodin, finds it produces a marked destructive action on the blood in the frog and the guinea-pig, but he does not attribute to it such powerful toxic powers as does Dr. Dreschfeld.

3. Methacetin as an antipyretic.

Dr. Mahnert introduces this new antipyretic to notice in the Pharmaceutische Post (April 7, 1889). Its composition is C_6H_4 OCH NHC₂H₃O being a derivative of amido phenol, the methyl ether of that substance. The drug is a flaky reddish powder, odourless, bitter to the taste, readily soluble in alcohol, less so in warm, and still less in cold, water. It fuses at 260° Fahr. It rapidly reduces the temperature of rabbits, acting chiefly on the central nervous system. In large doses it produces fatal convulsions. It has been found in small doses (three to five grains) to readily reduce the temperature of children, and has been successfully employed by Mahnert in various complaints. It is said to produce no vomiting, or ringing in the ears, or vertigo, or cutaneous eruption; but its action is accompanied by very free perspiration, and in one case some collapse occurred.

4. Guafine, a new antipyretic.

Dr. L. Bertrand (Med. News, Aug. 17, 1889, from Bolletino Furmaceutico, July, 1889) gives the results of his experiments with guafine. It is a resin which Bertrand extracted from the leaves of Psidium pyriferum, a tree belonging to the Myrtacew, and indigenous to the East Indies and South America. The leaves contain tannin and oxalate of lime, and only two per cent. of the resin. The results of numerous experiments proved that guafine was of considerable value in intermittent fevers.

5. Subcutaneous injections of quinine in fever.

M. Beuermann has been at some pains to find a solution of quinine which may be used hypodermically without pain or local irritation. In the Bulletin de Thérap. (Feb., 1889, p. 51) he recommends that twenty parts of hydrochlorate of quinine be dissolved in one part of pure hydrochloric acid and fifteen parts The solution is filtered, and each Pravaz syringeful of water. contains fifty-five centigrammes or 5 grain of hydrochlorate of One hundred hypodermic injections produced in no quinine, case any disagreeable symptoms, and he finds the temperature in typhoid and other febrile conditions lowered without any of the occasional disagreeable results of quinine.

6. Carbolic acid in the treatment of fever.

In the discussion on the action of antipyretics at the meeting of the British Medical Association (The Journal, p. 982, Nov. 3, 1888) Dr. Kirk, of Glasgow, stated that he found carbolic acid would produce a fall of 2° or 3° in fever cases when given internally in doses of four grains every two hours; and that, contrary to what other observers had found, he had never met with unfavourable

There are good evidences that though carbolic acid may be unattended with bad results in many cases, coma and collapse have at times followed its use.]

7. Digitalis in fevers.
Dr. Leidy (Therap. Gazette, Oct. 15, 1888) records the results of the administration of digitalis as tincture or infusion in ten cases of typhoid fever with failing pulse which was not improved by alcohol. In six cases the temperature fell considerably; in some as much as 3° Fahr. In all the other cases but one, there was a slight fall, and the effect was more permanent than that of the cold-water treatment. He found the tincture the best form of administration, in doses of fifteen minims three times daily. He concludes that digitalis reduces the pulse-rate, diminishes the frequency of respirations, and depresses the temperature in typhoid fever; and the main indication for its use is a weak heart-action with hyperpyrexia, but it should not be used where the heartaction is powerful and the pulse full.

8. Treatment of typhoid fever by naphthalin.

Sehrwald (Berlin. klin. Woch., Nos. 19, 20, 1889) has investigated the action of this substance. He finds that at ordinary temperatures naphthalin but feebly opposes the development of micro-organisms either of putrefaction or of typhoid fever, but its disinfecting power is strengthened by increasing the surface over which it is spread, or by shaking it with the fluids which contain the poison. Probably, too, the action of naphthalin is most powerful in its gaseous form; and its action, therefore, in the body must not be estimated by its effect in a test-tube. In the intestines the heat of the body promotes its vaporisation, and the action of the intestines brings it into close contact with the poison. Under such conditions it will, according to Schrwald, destroy germs which will resist calomel. He finds that, given internally, naphthalin is absorbed into the blood and broken up before elimination in the urine. In his paper it is recommended to administer the naphthalin with calomel in typhoid fever at the commencement of the disease. The calomel is given for its antiseptic power.

[The treatment of typhoid fever by naphthalin was recommended some years ago by Götze, and was recorded in the "Year-Book" for 1886. Although calomel may act as a destroyer of the organisms of typhoid fever, its favourable effect in this direction is more than neutralised by its purging effect on the

intestines.

9. Treatment of typhoid fever by benzoate of

soda and naphthol.

J. T. Robin (Thèse de Bordeaux, No. 23, 1888-9).—In a number of cases of typhoid fever treated by benzoate of soda the temperature was gradually depressed and the course of the fever shortened, while the symptoms were relieved. The prescription used was as follows:—Benzoate of soda four parts, naphthol three parts, and 160 parts of water. A fifth part to be taken every four hours.

10. Thymol in typhoid fever.

Dr. Frederic Henry (Bulletin Général de Thérap., February, 1889, p. 50, from Medical News) finds thymol, given in pill form in doses of one and a half to two grains every six hours, produces a lowering of the temperature, lessens the diarrhea, and keeps off cerebral excitation. He ascribes its action to its antiseptic properties; and in consequence of its insolubility, the thymol passes into the intestines and neutralises the toxic ptomaines which result from gastro-intestinal catarrh.

11. Treatment of weakness of mind after typhoid fever by hypophosphite of lime.

pr. Churton (Brit. Med. Journ., March 16, 1889, p. 588) records the case of a child, aged ten, who became imbecile during an attack of enteric fever. The mental condition persisted after convalescence, but she completely recovered her mental power after the administration for a week of liq. calcis hypophosphit. in thirty-minim doses thrice daily. In another case, that of a make

adult, recovery rapidly ensued when he took hypophosphite of sodium. Dr. Churton has had other similar cases, and the continuance of pyrexia does not prevent the action of the drug.

Such cases usually recover with the patient's return to health

without drug treatment.]

12. Treatment of variola by cocaine.

Luton (Rev Gén. de Cliniq. et de Thérap., 1889) and Ory (Ibid., Feb. 28, 1889) have found favourable results from this treatment. Luton employed cocaine at various periods in the course of variola. Administered at the time of invasion the temperature is rapidly depressed; with the fall in temperature the eruption, if out, ceases to increase. If the cocaine is employed at the period of eruption, the latter aborts, the shotty papules becoming shrunken. If the cocaine be discontinued, the fever recurs, and the eruption has an irregular course. Ory confirms the statements of Luton—that fever, nerve-disturbance, and general symptoms are alleviated by cocaine. Luton's formula is I centigram of cocaine every hour; or it may be given hypodermically, \(\frac{1}{10} \) centigram three or four times a day. The exact time of administration must be determined by the temperature and other symptoms, but the cocaine has no cumulative action.

13. Preventive treatment of the cicatrices of small-

Hartge (Journ. de Méd. de Paris, p. 512, 1889) advises that after the eruption, and in order to prevent scarring, cold compresses be applied if the attack is only a slight one; if the affection, however, is very severe, or confluent, he prescribes tepid baths for reducing the temperature, and the following ointment, locally but carefully applied, to obviate mercurialism:—Mercurial ointment, 10 parts; potash soap, 20 parts; glycerine, 40 parts.

14. Carbolic acid in the treatment of variola.

Dr. Montefusco (Bull. Gén. de Thérap., 1888, p. 311) employed carbolic acid, locally and internally, in the treatment of small-pox in the two epidemics which occurred in Naples. Locally the carbolic acid was applied as an ointment made up with oil and carbonate of lime. But Dr. Montefusco did not find any great benefit from its use, though it lessened the pain and the amount of suppuration. Internally given, however, he believes that carbolic acid produces most satisfactory results. The dose given was 15 to 30 grains in twenty-four hours, for adults; for children, not over 7½ grains. This dose of the acid was given in 5 to 6 ounces of water with syrup. The first effect is to reduce the temperature—after 7 grains the temperature often falls 3° Fahr. Usually the

temperature keeps down, but in some cases rises again, and in some cases with violent shiverings.

With the fall in temperature the pulse-rate falls with an increase in its force. The carbolic acid treatment does not cut short the duration of the disease, nor arrest the eruption, but it moderates its duration and intensity; it especially limits the suppuration, and abridges the period of suppuration. This is most marked where the carbolic acid treatment is commenced early, with the onset of the rash; it will then be noticed that though the rash be confluent, the pustules soon shrink and dry up, and are not surrounded by the usual area of swelling and inflammation. When the eruption is already well advanced, the carbolic acid treatment does little. In hemorrhagic variola the treatment is of little use.

In no case amongst the many in which the carbolic acid was given were there any bad symptoms; in all the improvement was general, with quiet sleep and increase of strength. The urine was generally more or less blackened after being exposed to the air some time. Where there is delirium or excitement, carbolic acid should never be given; but where there are pulmonary complications they are all lessened in severity by the carbolic acid treatment. In a later number of the same journal Dr. Romanelli denies Dr. Montefusco's statements.

15. Treatment of scarlet fever by salicylic acid.
Dr. Shakowski (Revue Mensuelle des Maladies de l'Enfance, ne, 1889) gave salicylic acid in 125 cases of grave scarlatina in

June, 1889) gave salicylic acid in 125 cases of grave scarlatina in children. He gave 1 part of salicylic acid to 75 of water, and 30 of syrup of orange. A dose of this was given every hour during the day, and every two hours at night. The temperature was rapidly reduced, and all traces of fever disappeared after the tenth day, though to avoid relapse it is recommended to keep up the treatment some time longer. His mortality was 3½ per cent.

16. The treatment of scarlet fever by mercuric iodide.

This treatment, which has been strongly advocated by Dr. Illingworth (vide "Year-Book," 1888), came under discussion at the Leeds and West Riding Medico-Chirurgical Society. Dr. Purdy stated that he had treated 50 cases in this way, and believed it hastened a fall in the temperature, and lessened the chance of lingering sequelæ, and diminished the mortality. Dr. Mayo also thought the treatment beneficial in some cases; but Dr. Jacob, Mr. Rumboll, Dr. Swann, Mr. Hick, who had all tried the method, were not in favour of it; and it was thought by Mr. Hick that the

tendency to nephritis was rather increased by pursuing it. (Brit. Med. Journ., Jan. 19, 1889, p. 136.)

This method has been tried at the London Fever Hospital

without beneficial results.

17. Faradism in diphtheria. Dr. Clémens (Revue de Thérapeutique, Nov. 15, 1888) insists again on the employment of weak faradic currents in diphtheria. He uses a metal sound, one end of which is applied to the tonsils, and the other pole is placed on the neck. The current should be a weak one, such as to be just felt when applied to the hand. The application should be made for one half-minute, and should be repeated three times in a quarter of an hour. The current not only effects the separation of the false membranes, but by dipping the electrode in medicated solutions the membranes can be destroyed, and prevented (it is said) from recurring. best solutions for this purpose are chlorate of potash, tincture of iodine, etc. In grave cases four to six sittings should be given in the day, and one or two during the night.

18. Carbolic acid in the treatment of diphtheria.

Dr. Gaucher (Bullet. Gén, de Thérap., Sept., 1889) advocates carbolic acid as the best antiseptic for applying locally; but glycerine, which is often used as a vehicle, is objectionable, because, being miscible with water, it soaks into too large an area, and softens parts adjacent to those which require cauterising. He recommends removal of the false membranes, and the application of a mixture of the following composition every three or four hours, or oftener; and the throat should be sprayed or gargled :-

Camphor	194	510		- 22	20 parts.
Castor Oil	1919	100	444		15 ,,
Alcohol	- 375	· in		10.00	10 ,,
Crystallised		Acid			5 11
Tartarie Aci	d .m	161	TYPE	1796	I part.

Dr. Gaucher's rate of mortality among the patients so treated was 7 per cent,

19. Treatment of diphtheria by benzoate of soda. Dr. Geay (Gazette Med. de Bordeaux ; and Revue des Maladies d'Enfance, p. 140, March, 1889) recommends the treatment suggested by Dr. Brandel, of Algiers. A tablespoonful is given every hour of a mixture of benzoate of soda in gum julep (1 in 5), while every hour also the throat is sprayed by an aqueous solution of the same salt (1 in 10). In addition, carbolic acid, eucalyptus, and essence of turpentine, are vaporised from a vessel near the bedside of the patient.

20. Eucalyptus oil in diphtheria. Dr. Murray Gibbes (Revue de Thérap., Nov. 15, 1888) records remarkable success in the treatment of diphtheria by oil of eucalyptus, which, according to him, prevents the multiplication of micro-organisms. The oil, whether introduced into the blood as a fumigation, or by the alimentary canal, when swallowed is found in the secretion of the pharyngeal glands. It thus opposes itself to the formation of false membrane. In addition, the oil prevents the decomposition of the separating false membranes; and when it is administered, it is said the false membrane never undergoes discoloration. The author recommends that the leaves of the Eucalyptus globulus be placed in a basin of boiling water under a canopy over the patient. In this way the vapour is absorbed into the system. At the same time local inflammation of the throat is to be combated by poultices and steam inhalations.

21. Treatment of diphtheria by cyanide mercury.

Dr. Sellden (Bulletin de Thérap., Jan., 1889) recommends the following formula :-

Cyanide of		175			30 grains.
Tincture of	Aconite		20.0		drachm.
Honey	1000				2 oz.
Water	200		100		6 oz.

Of this, one tablespoonful is to be taken internally every quarter of an hour, half-hour, or hour, according to the age of the patient; and every quarter of an hour gargling is to be practised with a solution of cyanide of mercury of the strength of one grain to six ounces.

22. Treatment of diphtheria by hydronaphthol,

papain, and hydrochtoric acid.
Dr. Caldwell (Archives of Pediatrics, Feb., 1889, p. 97) recommends spraying the throat every half-hour with the following :-

Papain	177		14997		3ij.
Hydronaphthol	***	-55	-44	-30	gr. iij.
Acid. Hydrochlorie.	Dil				mxv.
Aq. Destill, ad	***			200	3iv.

The papain is not very soluble in water, hence it sometimes obstructs the atomiser. By adding four drachms of glycerine to the mixture the solubility is greatly increased. The papain dissolves the membrane, and acts in acid, neutral, or alkaline menstrua. The hydronaphthol is a powerful antiseptic, and when used with the papain to spray the throat the membrane rapidly dissolves. The author writes: "The spray is almost worthless, even for diphtheria of the tonsils, unless the tongue is forcibly depressed,

because the moment the spray strikes the palate and posterior part of the tongue the reflex apparatus is stimulated, and the anterior opening of the pharynx closed." "The whole proceeding has to be done with more or less force," three persons being required for each spraying; and though he has seen "no untoward effects from this violent exertion of the child, there might be danger of heart-failure and too great exhaustion of the vital functions."

Dr. Caldwell recommends that the child be fed by two to six ounces of milk every two hours. The papain aids the digestion of milk, for most of it is swallowed.

23. Treatment of diphtheria by resorcin.

Dr. Callias (Soc. de Méd. Pract.) obtained good results from a five to ten per cent, solution of resorcin applied with a camelhair brush every hour, night and day, in serious cases, and every two hours in mild ones. At the same time a one or two per cent, solution is to be sprayed into the mouth and nose. Resorcin is thus easily exhibited, owing to its sweet taste, great solubility, and slight causticity. Dr. C. de Gassecourt agrees that no untoward results are produced by resorcin.

24. Treatment of diphtheria by thymic acid.

Dr. Gallors (Lyon Medical, July 28, 1889) employs thymic acid in diphtheria in a solution of 1 in 1,000. It is antiseptic without being caustic or toxic. He gives as food cold milk, and every two or three hours, according to the gravity of the case, he freely washes out the pharynx with the following cold solution :-

Thymic Acid 15 grains Alcohol ... Water ... 2 to 5 drachma 35 ounces *** ***

A little saccharin may be added to make the taste more agreeable. Dr. Gallors claims great success for this treatment, the membrane being prevented from extending; but Messrs. Cante and Dumplard have not obtained the same favourable results.

25. Treatment of diphtheria by ablation of the

membrane and antiseptic cauterisation.
(Brit. Med. Journ., vi., 1889, p. 1,070).—At a recent meeting of the Société Médicale des Hôpitaux Mr. Gaucher mentioned the fact that he had cured seventeen cases of serious diphtheritic angina by this method. He added that M. Dubousquet-Laborderie had treated eighty-one cases in this way in four years. Four of the patients succumbed to croup, but they were under the age of five, and the false membranes had already extended to the larynx when the treatment was applied. There were no toxic symptoms in any case, though the urine was black, showing that the treatment acted generally as well as locally. Mr. Gaucher employs a solution of seventy-five to 150 grains of crystallised carbolic acid in alcohol, adding ten grains of tartaric acid to render the solution antiseptic. After scraping the throat thoroughly with a short-haired brush, he applies the solution three times daily. Every two hours the mouth is washed with a 1 in 100 carbolic solution.

26. Treatment of diphtheria by tincture of iodine. Dr. Goldvag (St. Petersburger Med. Woch., 1889, No. 28) treated forty-six patients suffering with diphtheria, four of whom were adults, by applications of tincture of iodine repeated daily. The epidemic was malignant, but in thirteen cases only two applications, and in one case only a single application, of the iodine sufficed to assure recovery. The mortality was 8-6 per cent. According to the author, the good effect of the iodine is due to its antiseptic effect, as well as its power of dissolving diphtheritic membrane.

27. Antipyrin in the treatment of diphtheria.

M. Barata Rebeiro (Bulletin de Thérap., January, 1889, p. 48) records the case of a child, aged five years, whose condition seemed desperate until antipyrin was prescribed. The false membrane had covered the whole of the pharynx, and was re-formed as fast as removed. Vigorous spongings were applied to the affected region with a solution of antipyrin (1 in 10), cocaine being each time applied first; at the same time antipyrin was given internally and used as a gargle. The child rapidly recovered. In nasal diphtheria M. Rebeiro advises irrigations with antipyrin solution, or insufflations of the drug finely pulverised. Internally he gives antipyrin seven grains or more, port wine one ounce, water one ounce, every two hours, with milk diet, stimulants, and cardiac tonics.

[Antipyrin applied locally in this way has quite failed to be of service, and should be used very carefully, if at all, internally, in diphtheria, on account of the frequent cardiac depression.]

28. Treatment of diphtheria by carbolic acid and camphor.

Chantenesse and Widal (Journ. de Méd. et de Chir. Prat. Août, 1889) find that carbolic acid solution (1 per cent.), boric acid (4 per cent.), salicylic acid in alcohol (5 per cent.), perchloride of iron solution (1 per cent.), biniodide of mercury (1 in 2,000), are of little use in dissolving the membrane. The solution to which they give the preference is one of 25 parts of glycerine with 5 parts of pure carbolic acid and 20 parts of camphor. The

liquid is stirred for ten minutes in a "bain marie" of boiling water, and allowed to cool; there separate out two layers—a lower clear layer, and an upper viscid white layer of glyceride of phenol and camphor. In this fluid cultivations of the bacillus could not be made; and the authors recommend its application should be preceded by clearing out the throat of false membranes by a probe with cotton-wool.

29. Cultivations of the diphtheritic bacillus.

Boux and Versin (Annales de l'Institut de Pasteur) have established the presence of the bacillus of Klebs and of Loeffer in connection with diphtheria. They have cultivated the bacillus in veal broth, and find that as long as the culture is acid it is not very poisonous, but becomes much more so on becoming alkaline. Its toxicity is much impaired by heating, and by the addition of carbolic or boracic acids; and a very small quantity of acid suffices. Guinea-pigs and pigeons can swallow the cultivations without much effect, but injected subcutaneously a fatal result rapidly follows. This virulence of the poison, however, is not due to the presence of the bacilli themselves, but to some poison secreted by them. This appears to be shown by the inactivity of the fresh cultures as compared with those that have been some time made; and the practical deduction from this is, that the physician should early treat the false membrane to prevent bacillar products from producing constitutional results.

30. Importance of local treatment in diphtheria. Dr. Jules Simon (Bull. Gén. de Thérap., July, 1889, p. 215) insists on the importance of local treatment in diphtheria. He advises energetic spongings every hour with the following solution:—Salicylic acid, 7½ to 15 grains; glycerine, 10 drachms; alcohol, q.s.; infusion of eucalyptus, 15 drachms. In addition, when the false membrane is very adherent and thick, he directs that equal parts of perchloride of iron liquor and glycerine should be applied to it. For nasal cases he recommends syringings, and the application of a sulphur pomade; in labial diphtheria cauterisation by nitrate of silver is required. For over-enlarged glands he recommends frictions with the following:—Extract of belladonna, 2 parts; iodide of potassium, 1 part; lard, 30 parts. If the larynx is involved, M. Simon makes use of emetics, and of tracheotomy when required.

31. General treatment of diphtheria.

In the "Year-Book" for 1889 Dr. Jacobi's directions as to the treatment of diphtheria were summarised; since then, in the Arch. of Pedr., March and April, 1889, he has more fully stated his views. He points out that the many proposals for tearing.

scratching, cauterising, swabbing, brushing, or burning away membrane, have been applicable only to the purely tonsillar cases, which in most instances are the most benign. In pharvngeal and laryngeal cases in young children, as he points out, it is difficult to make local applications through the mouth without using violence. He therefore recommends that in such cases the medicament should be syringed through the nose. Where it is possible to make local applications without difficulty, the membrane should be brushed with tincture of iodine, or a drop of concentrated carbolic acid, several times daily. Powders and everything dry irritate and give rise to cough, and the only one not contra-indicated is calomel; and powders which have a powerful taste or odour, such as quinine, sulphur, iodoform, must be specially avoided. Even papain as powder causes irritation, but in aqueous solution (1 in 20, or stronger) may be used as a spray or injection. In diphtheria of the nose frequent disinfection is required, as the nasal mucous membrane is very freely absorbent; and where necessary the nares must be cleared out before injection by a probe with lint steeped in carbolic acid around it. Various fluids are recommended by Jacobi, such as boracic acid saturated solution; or a liquid composed of 1 part of bichloride of mercury, 35 of chloride of sodium, and 5,000 of water. "On the successful injecting or spraying of the nares hangs every life in a case of nasal diphtheria." The injection must be made to pass in at one nostril and out at the other, or through the . mouth; the best syringe is a simple glass one with a soft rubber tubing on the nozzle, and must be introduced horizontally into the nostril. For glandular swelling in the neck an ice bag is the best remedy; and if the air passages are kept thoroughly disinfected, they will decrease in size.

Inunctions of mercury or iodide of potassium over the en-

larged glands are of little use.

Inhalation of steam Dr. Jacobi approves of in cases of tracheobronchial diphtheria. The child should be kept in a small bathroom for days, the hot water being turned on constantly, and the patient breathing the hot clouds. Where there are few muciparous follicles present, and the membrane is firmly adherent to the surface, steam is less appropriate, and, by softening the surrounding healthy membrane, may favour the extension of the process. To evolve large volumes of steam, the slaking of lime is an old and effective procedure. Jaborandi, recommended by Guttman and others, though it softens the membrane, enfeebles the heart-action.

Of drugs administered internally, he prefers perchloride of

iron. It is astringent and antiseptic, and its passage over the local disease when it is swallowed is beneficial. It must be given in hourly or half-hourly doses, or even every 15 or 20 minutes. An infant of a year old will take 1 drachm in 24 hours; a child of three to five years will take 2 or 3 drachms. A good adjuvant to it is glycerine. Vomiting and diarrhœa contra-indicate the iron treatment; so, too, in cases of intense sepsis, feeble heart, frequent pulse, and irritable stomach, iron is better withheld, and reliance placed on alcohol. Again, to rely on iron in cases preeminently larvngeal means waste of time and danger. As to mercury chloride, the benefit to be derived from it depends on the time of its administration; and tracheotomy can be often avoided by it, if its use be commenced in good time. It is in cases of laryngeal diphtheria that it is of so great use. It must be given every hour. The smallest daily dose was given to a baby of four months old, namely, 4 grain; but half a grain daily is required for a child of three to five years; and the doses, which must be $\frac{1}{50}$ gr., require dilution of 1 in 6,000 or 10,000 of water or milk. If gastric irritation occur, opium will remedy it.

For diphtheritic failure of heart Dr. Jacobi uses caffeine, strychnia, digitalis; and for cases with threatening asphyxia from respiratory paralysis, strychnia hypodermically, the interrupted

current, and artificial respiration.

Dr. Guelpa, in a long paper in the Bulletin Général de Thérap., May 23, 1889, p. 87, points out that all the remedies-resordin, preparations of carbolic acid, solution of caustic soda, eau de Vichy, salicylic acid, perchloride of iron, salicylate of soda, and many others which have been highly lauded in the treatment of diphtheria, and of which reports have appeared in previous "Year-Books"-have failed when tried by others. The main cause of these different results is due, Dr. Guelpa urges, to the fact that the applications are not made as frequently and as constantly as recommended. Nearly all the remedies mentioned above require, in order to be effective, to be repeated every hour, or oftener-even every half or quarter of an hour-during both night and day. This is an essential point in the treatment, the object of which is to prevent the spread of the membrane, and the decomposition of the discharges, as well as perhaps to destroy the organisms which possibly after absorption give rise to the constitutional symptoms.

Dr. Guelpa points out that M. Callias in advocating resorcin in diphtheria lays stress on the applications being made with a five to ten per cent. solution every hour, day or night, in addition to applying pulverisations every two or three hours to the nasal and oral cavities, as well as two or three fumigations daily with resorcin sublimed by heat. So, too, M. Roulin's successful results from carbolic acid were obtained by irrigations every hour, day and night. Others who have advocated carbolic applications all obtained their successful results by repeated and regular frequent applications. Thus, Kempster (Amer. Journ. Med. Sciences, July, 1888), Rothe d'Attenburg (Francotte: La Diphthérie, Bruxelles, 1885), sponge the diphtheritic surfaces hourly with a carbolic acid solution, and order in addition gargles of the same every half-hour. Calligari (Nuova Liguria Medica, 1871) applies every quarter of an hour a solution of carbolic acid (1 in 100 parts).

Jacobi (Gerhardt's Handbuch der Kinderkrankheiten) insists on the necessity of frequent applications of carbolic acid. Oertel (Ziemssen's Handbuch der Allgemeinen Therapie, 1882) writes that carbolic acid is the most effective medicament for the treatment of diphtheria, but it must be used every two hours, every hour, or oftener still, for five or ten minutes each time, as a spray of a five per cent. solution. Bicarbonate of soda, which in general has been of little use in the treatment of diphtheria, because only used at long intervals, has in the hands of Baron been very successful, because he prescribes as much as two bottles a day, the large

quantity of liquid freely washing out the throat.

So, too, salicylic acid and salicylates, though useless in the hands of those who have stinted their free use, have proved efficacious when the treatment is pushed as has been done by Weise (" Ein Beitrag zur antiseptischen Behandlung der Diphtherie," Berlin. klin. Wochenschr., 1881). Dr. Guelpa believes that so far from diphtheria being the most intractable, on the contrary it is more readily dealt with than other illness due to microbes or organisms, or to their products, because the lesion is at first, as he believes, a local one. He regards the essential point in the treatment to be the limitation of the spread of the false membrane; he insists that the membrane separates and falls away spontaneously between the second and the eighth day, and that, though fresh deposits occur, they are less thick and have a still briefer period of existence. His method of treatment is not to make any attempt to destroy membrane already deposited, but to prevent its spread by encircling it repeatedly with local applications of perchloride of iron or other medicament. Roux, Yersin, and Löffler's researches are relied upon as showing that the ill effects of the diphtheritic poison are only produced when the poison enters the blood in abundant quantity; and Dr. Guelpa states his own observations have convinced him that no diphtheria is ever fatal, unless the membrane has invaded a large surface. In accordance with this

belief, Dr. Guelpa insists that, however much the child or patient may wish to sleep, the regular applications of the carbolic acid or other medicament must be adhered to both night and day. Dr. Guelpa does not agree with the method of urging children to take an over-generous diet in diphtheria; he advises that all food shall be given in a liquid or semi-liquid form, that the quantity should be moderate and inversely proportional to the intensity of the fever and the violence of the inflammation of the throat.

Dr. Guelpa summarises his methods of treatment as follow:—Isolation of the patient in a well-aired room; have in the room large basins of a five per cent. solution of carbolic acid, which must be kept heated so as to evaporate (the urine must be watched, to avoid toxic effects); give internally an emetic, followed by a light purgative, and keep the bowels open twice daily, to excrete any poisonous products which have been swallowed; if the fever is high, give sulphate of quinine. Every quarter or half hour, both night and day, spray fully the throat and nasal cavities with a tepid solution of perchloride of iron (15 in 1,000), or else with solutions of carbolic acid, or of bichloride of mercury. The food is to be given as already described.

In advanced cases where there is much swelling in the neck, or the nasal cavities are blocked so as to prevent their free irrigation, the nose must be cleared out forcibly with a sound; and in extreme cases the superior maxilla must be trephined to allow of freely washing out the antrum of Highmore. Dr. Guelpa does not advocate tearing away the membrane unless the nose is blocked up, and urges that when tracheotomy is to be performed

it shall not be postponed too long.

[With regard to these two papers of Dr. Jacobi and Dr. Guelpa, it will be seen that both authorities agree in the necessity of frequent and careful applications of disinfecting fluids to the surfaces attacked by membrane. The exact composition of the fluid used is of less importance probably than that the surfaces shall be freely flushed. The bichloride of mercury has been the most serviceable in our experience; and the thorough clearing out of the nostrils, and syringing them out in nasal cases every hour, certainly contributes to successful treatment. And we quite agree with the doctrine of Dr. Jacobi that the children must be roused from their septic drowsiness, however unwilling they may be, for the purpose of washing out the nares and pharynx, to give them the best chances of cure. But in too many cases the spread of the membranes to the smaller divisions of the air tubes will defy any treatment with which we are acquainted.]

GENERAL SURGERY.

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1. Antiseptics and wound-dressings.

Although laboratory experiments on the action of antiseptics can hardly be made exactly to correspond with the conditions of their use in actual surgery, yet no one will dispute the value of the former. Dr. Edington (Brit. Med. Journ., May 11, 1889) has published an elaborate record of experiments on the germicide action of carbolic acid, corrosive sublimate, and hydronaphthol. Briefly, they showed that carbolic solutions, even as strong as 1 in 20, have a slow and feeble action as germicides, and that they may be at times positively dangerous when used to wash out wounds, owing to their producing a necrosed layer of tissue, which forms a nidus for bacterial growth. Corrosive sublimate solutions did not come out well from the tests employed, but hydro-naphthol promises to be a valuable addition to the list of antiseptics. A warm solution of the latter of 1 in 300 "possesses very great germicidal powers, and such will be found of the greatest service in washing out septic cavities and wounds." It is soluble in alcohol to the amount of 1 in 2 parts, in oil 1 in 20, but in cold water only 1 in 1,100 parts. Hydro-naphthol is said to be non-poisonous.

Dr. Foote (Internat. Journ. of Med. Scien., Sept., 1889) conducted a somewhat similar series of experiments to those mentioned above, but the results were not the same. He found carbolic solutions (1 in 100) to have active germicidal powers; did not report so highly of hydro-naphthol, but held that creolin (a derivative from coal-tar), used in the proportion of 1 in 100, was one of the safest and most effective of antiseptics. Creolin makes a milky emulsion with water, and this feature is a distinct drawback to its use; further, there is no doubt that it is liable to cause eczema of the skin around the wound. Dr. Behring, who has investigated the action of creolin as an antiseptic, believes it to be inferior to carbolic acid as a wound-dressing, and that its

internal administration is attended with some risk of toxic effects. Dr. Baumgarten (Centralblatt für Bacteriol., Band v., pp. 113, 139) confirms this view. Creolin, when given internally, may produce

dark urine, like that due to carbolic acid poisoning.

The practice of wound-dressing of three well-known German surgeons, Von Bergmann, Mikulicz, and Schmid, is summarised in the Centralblatt für Chirurgie, 1889, No. 34. Iodoform, corrosive sublimate, and carbolic acid are largely employed by all three. Schmid discards drainage unless suppuration occurs; Mikulicz advocates the method of healing by moist blood-clot advocated by N. Senn (Internat. Journ. of Med. Scien., Sept., 1889) has introduced a substitute for the blood-clot in the case of osteotomies when a gap in the bone must be left. He inserts small wedges of decalcified bone, using antiseptic dressings, and has proved by experiment that they are capable of organisation and incorporation with the rest of the bone, though, should suppuration come on, they may simply act as foreign bodies, and require to be removed. Senn believes that decalcified bone-disks will be found of value after trephining when it is not possible to re-insert the bone. He advocates that they should be perforated in several parts, to assist their invasion by the granulations. Ten cases are given of the successful use of the decalcified bone in filling cavities made during operation.

M. Boeckel (L'Union Médicale, May 9, 1889) reported thirtythree major operations in which antiseptics had been used thor-

oughly and drainage wholly omitted, with the best results.

Mr. Jordan Lloyd (Brit. Med. Journ., Jan. 19, 1889) reports very favourably of dry antiseptic dressings, and especially of finely powdered boracic acid, which he rubs into the flaps of an amputation-wound before sewing it up. He employs Gamgee tissue, but still uses drainage-tubes, even in the cases in which primary union is expected, but arranges for their early withdrawal without disturbing the whole dressing.

2. Safeguards in the use of cocaine.

The dangers attending the indiscriminate use of cocaine are now well recognised. The death of a patient in Russia from an overdose injected into the rectum, followed by the suicide of the surgeon, drew attention to the subject; and several other disastrous cases have been reported from time to time. From the papers of Dr. Wyeth (New York Medical Journal, Sept. 21, 1889) and other writers, the following deductions may be derived as to the best and safest means of procuring local anæsthesia by the use of cocaine injected hypodermically.

1. Solutions of the strength of from 2 to 5 per cent. are

equally efficacious and less dangerous than the stronger ones (e.g. 20 per cent.). They should always be freshly prepared if possible; distilled water is essential, and a weak antiseptic (such

as boracic acid) probably of value.

2. Wherever it is practicable, the cocaine injected should be prevented from being absorbed into the general circulation by the use of an elastic compresser above the seat of operation. The constriction can be used with ease in the case of amputation of the fingers, or of removal of tumours from a limb, by means of an elastic tube, and in other parts of the body a little ingenuity will often effect the same purpose. The cocaine will, to a large extent, be washed away by the hæmorrhage, but it is an additional safeguard to remove the constriction gradually.

3. With regard to the dose employed, fifteen minims of a four per cent. solution (i.e. about 3rds of a grain of cocaine) is usually enough for hypodermic injection, though thirty minims may be used with comparative safety. In the case of mucous canals

(rectum and urethra) one to two drachms may be used.

There appears to be in certain persons an idiosyncrasy with regard to cocaine, and we may expect to hear from time to time of toxic symptoms following the administration of a comparatively small dose. Slight dilatation of the pupils, mental exhilaration (amounting sometimes to delirium), opisthotonus, convulsions, and sudden heart failure are the chief symptoms due to cocaine

poisoning.

A very elaborate report on the physiological properties of the coca-alkaloids (including cocaine) by Dr. Stockman, is to be found in the British Medical Journal for 1889, pp. 1047, 1108, etc. Dr. Abadie reported a case of death from the hypodermic injection of 3 ths of a grain of cocaine into the lower eyelid, preliminary to an operation for extropion. It should be noted, however, that the patient was a feeble old woman. The dose was much under that considered safe by Lépine, who holds that not more than three grains should be injected hypodermically, and about twice that amount for application to a mucous cavity. It is stated that the use of cocaine hypodermically about the head is especially liable to be followed by unpleasant symptoms (Wölfler-Schmidt's Jahrbüchep, No. 7, 1889). It seems that this is probably to be explained by the special difficulty here present of confining its action to the part operated on.

3. Primary union after excision of joints.

It will be admitted that if this result can be obtained, as a rule, the operation of excision will come into much more extended use, and regain some of the credit which amongst many surgeons it has certainly to a large extent lost. We refer especially to the operations of excision of hip and knee.

In excision of the hip, it is now universally admitted that the best line of incision is the anterior one passing between tensor

vaginæ femoris and sartorious muscles.

Mr. A. E. Barker (Brit. Med. Journal, Jan. 19, 1889), in view of the dangers attached to the use of strong carbolic lotion and other antiseptics for irrigation during an operation, advocates flushing the joint, etc., with hot sterilised water. This is maintained during almost the whole operation, a gouge being employed, through the centre of which a constant stream is kept up, by means of an indiarubber tube attached to the hollow handle. When all the diseased tissue has been scooped away, the cavity is dressed with iodoform; no drainage-tube is used; and in the final dressing pressure is brought to bear on the outer side of the femur, so as to press the neck into place. He has had primary union in several cases.

4. Excision of both hip-joints.

Mr. Battle (Lancet, October 12, 1889) performed this operation in a case of acute suppuration, the patient being a boy aged fourteen. Both hip-joints apparently suppurated at the same time; on one side the femoral neck was sawn through and the head removed, on the other the latter was found as a detached epiphysis and no section was required. Ten days elapsed between the two operations. The boy made a slow but good recovery, being ultimately able to walk without artificial support. Only three or four similar cases seem to have been reported in English and American medical literature.

5. The treatment of old unreduced dislocation of the femur.

This subject is discussed by Dr. E. Kien in the Beiträge für klinischen Chirurgie, vol. iv., p. 537. It is a subject peculiarly difficult to generalise upon, each case having to be decided on according to the special features present; the writer's chief deductions are the following:—

 Even after a dislocation of the hip has remained unreduced for two months careful manipulation will succeed at times, but violent efforts to obtain reduction are dangerous to the vessels

and to the neck of the femur.

In old unreduced dislocations with much deformity or loss of function osteoclasis is not advisable, and our experience of osteotomy is as yet too small to enable us to draw conclusions.

 In a few cases excision of the femoral head gives a good result, but they require to be carefully selected. The allied subject of unreduced dislocation of the shoulder is treated by Dr. O. Knapp (*ibid.*, p. 373). Excision of the head of the humerus, though very rarely indicated, is the best operation when any is called for, it being useless to attempt reduction in very old cases by incision, etc.

6. Fractures of the neck of the femur.

Dr. Senn (Journ. of the American Med. Assoc., Aug. 3, 1889) advocates the employment of plaster of Paris casing, with direct lateral pressure upon the trochanter major, in all cases of fractured femoral neck in which it is possible to hope for bony union. "Auto-extension" is used when the fracture is non-impacted, by making the patient stand on the sound leg upon a stool, the weight of the limb which is held and drawn down by an assistant then removing the shortening. Plaster-of-Paris is applied so as to encase both thighs, the pelvis and abdomen. In this is fixed a steel bar running outwards over the trochanter on the affected side, and through this a screw is made to press a cushion against the bone, an opening having, of course, been left in the plaster casing. The splint is removed from ten to twelve weeks later, but the patient is not allowed to use the limb earlier than four to six months after the accident. It may be doubted whether this method is really an improvement on the usual one for non-impacted cases, and certainly Senn's advice to employ it for impacted fracture is not good, for lateral pressure here is useless, except that such cases may be claimed as examples of bony union following the treatment.

7. The treatment of fractures of the patella.

Mr. Mayo Robson (Royal Medico-Chirurgical Society, June 1, 1889) brought forward a method which may be considered as allied to the use of Malgaigne's hooks. After cleansing the skin over the joint, and removing the fluid in the latter by aspiration, he passed two steel pins transversely through the ligamentum patellæ and quadriceps aponeurosis immediately above and below the fragments. The projecting ends of the pins are then approximated so as to make the fragments touch, and removed at the end of a few weeks. Mr. Robson has only used the method in two cases. He advises drawing the skin well up before introducing the upper needle.

8. Operations on the head.

Dr. George Fowler (New York Med. Jour., Aug. 24, 1889) succeeded in localising a bullet embedded in one spheno-maxillary fossa by means of the telephone connected to a probe. The "characteristic rasping, clicking sound which announced contact with some metallic substance in the tissues" was heard, and the

ball removed with Péan's forceps.

A case of great interest as regards cerebral localisation and cerebral surgery is reported by Dr. Falkin and Mr. Hare in the Medical Chronicle for October, 1889. The patient, a girl, aged 17. was struck on the head by a falling brick at the age of ten months, no wound being caused. For some weeks the left side of the head and face had been much swollen. Both right limbs became partially paralysed, and their growth was interfered with-the fore arm and hand being alone affected in the upper limb. The temperature of the right limbs was constantly from 11 to 21 degrees lower than on the left side, and the leg was in a condition resembling that produced by infantile paralysis. Lying over and crossing the line of the left fissure of Sylvius, a deficiency in the skull could be easily felt. This depression was exposed by operation, the thin membrane filling it punctured, and a quantity of clear serum let out. A large cyst depressing the brain to the extent of 2 inches was then opened up by removing bone with the trephine, and an osteophytic growth from the inner surface of the skull removed. The brain expansions were found to have obliterated the cyst cavity during the operation. Bone grafts were used, and the wound healed completely by the twelfth day. Massage and the faradic current were used to the affected limbs for some time, and steady improvement followed-both motion and sensation being to a large extent regained. The surface temperature became equal on the two sides, and the difference in growth became less marked. The most difficult feature to explain in the case was the combination of involvement of fore-arm and leg centres by the lesion, these centres being not placed together according to the accepted views of cerebral topography. important case is reported with great care.

A case of removal of a tumour (round-celled sarcoma) from the frontal cortex was recorded by Dr. Fischer (Wiener Med. Presse, No. 25, 1889). Aphasia and monobrachial palsy had indicated the position of the tumour in the ascending frontal convolution, but in the first operation it could not be found. The second was performed five months later, the growth being shelled out by the finger. Death followed, from recurrence, two months later.

Mr. Rushton Parker (Brit. Med. Assoc. Meeting, 1889) brought forward a case of removal of a cerebral tumour from the right Rolandic area of a man, aged thirty-eight. Severe headache and mental dulness, followed by paralysis of left arm and leg, had been the symptoms. They were not relieved by the use of iodide of potassium. A large trephine was applied, and a tumour the

size of a walnut removed from the cerebral cortex. It was thought at first to be a sarcoma, but proved to be gummatous. Suppuration followed, and the symptoms became worse, and by a second operation the sinuses were scraped out and packed with antiseptic dressings. Healing eventually occurred, and the patient

quite recovered.

Some careful researches into the relation of the chief cerebral convolutions to the surface of the skull are given by Messrs. Anderson and Makins (Lancet, July 13, 1889). They also contrast and summarise the various systems of cranio-cerebral topography (such as those given by Turner, Ecker, and Reid), and the paper cannot fail to be of use to surgeons preparing for an operation on the cerebral cortex. At present, it must be admitted that but few cases of cerebral tumour are likely to be benefited by surgical measures. Excluding those connected with the cerebellum, only from five to seven per cent. are situated in regions accessible to the trephine and knife, and give rise to such symptoms as enable their locality to be fixed. And of this smal. proportion a good number will be cases of infiltrating sarcoma, interference with which is hopeless. Messrs. Knapp and Bradfo d (Boston Med. and Surg. Journ., April, 1889) report a fatal case of removal of a cortical growth (1 a gumma) and review the hitherto published records, which are, on the whole, rather A few satisfactory cases have, however, been discouraging. recorded. M. Péan (Bull. de l'Acad. de Médecine, February 19, 1889) removed an endothelioma which was pressing on the centre for the lower limb, and had produced epileptiform seizures. The wound had healed by the tenth day, and two months later the patient was entirely free from fits. It is unfortunate that the endotheliomata (or psammomata, according to the old nomen-clature) form only a small proportion of the tumours in the cerebral and spinal cord regions, for few are so slow in their growth, or so little prone to recur after removal.

9. Trephining for "traumatic epilepsy."
The results of this operation have been in some cases very unsatisfactory, and frequently during its performance no cause has been detected (such as depression of bone or adhesion between the brain and dura mater). A case which raised the question whether "Jacksonian epilepsy" after traumatism, and with a localised area of scalp tenderness over the corresponding motor centre, really indicated a "coarse lesion" or not, was reported by Dr. Lees and Mr. Page (Brit. Med. Journ., April 20, 1889). In the discussion which followed, it was suggested that "traumatic epilepsy" might be at times due simply to nutritional changes in the cortex, and that this might explain the

occasional failure of trephining to relieve the symptoms.

Mr. Jordan Lloyd (Brit. Med. Journ., April 20, 1889) reported a case of cerebral abscess due to middle-ear suppuration, in which he trephined and let out four ounces of pus from the left temporosphenoidal lobe. Aphasia was the only localising symptom. man made a complete recovery, having been almost moribund at the time of operation.

Mr. Morgan (Medical Society of London, March 4, 1889) showed a case of successful trephining for cerebral abscess five days after injury to the head. A small depressed fracture was present; the abscess lay in the motor region, and was attended by

hemiplegia, completely recovered from after the operation.

10. The surgery of the spine.

Dr. William White (Annals of Surgery, July, 1889) reviews in an elaborate and valuable paper the subject of operative treatment for spinal dislocation, caries, and tumours, and adds two new cases to those reported by Macewen and Horsley. He is in favour of extending the range of operative interference, and enforces with considerable weight the arguments adduced. He gives a very precise account of the method of operating. A useful table of diagnostic points in spinal lesions is given. One statement of interest is that "the cause of paralysis in Potts' disease is not, as a rule, a transverse myelitis or a hopeless degeneration, and is not due to the pressure of the carious or displaced vertebræ, but is, in the majority of cases, the result of an external pachymeningitis, which results in the formation of an extradural connective-tissue tumour." Dr. Weir Mitchell (American Journal of Medical Sciences, May, 1889) writes on the advantages of extension in the treatment of Potts' curvature, with or without paralysis.

Mr. W. A. Lane operated on a case of paraplegia from angular curvature in a child (Brit. Med. Journ., April 20, 1889), removing the spinous processes and laminæ of the fourth, fifth, and sixth dorsal vertebræ. The cord appeared to be compressed by bone projection, and the dura mater was not thickened (contrary to the view just quoted from Dr. White). Gradual recovery in the power of the legs followed, and the incontinence

of urine which had previously been present, ceased.

A case similar to that just referred to was reported by Mr. Thompson (Lancet, August 17, 1889), the curvature being situated at the junction of the cervical and dorsal parts of the spine. Paraplegia was present. Respiration was almost entirely diaphragmatic, and, owing to tympanitis coming on, his state became critical. At the operation, parts of three vertebræ were removed; the dura mater did not appear to be thickened. There was considerable shock from the operation, but gradual recovery ensued, and some power was regained over the legs.

11. The treatment of cancer of the rectum.

An interesting discussion on this subject was introduced by Mr. Jessop at the Leeds meeting of the British Medical Association, and his views and those of a number of other surgeons on the questions of inguinal versus lumbar colotomy and excision of the rectum are to be found in the Brit, Med. Journal for Oct. 12, 1889. The last-named operation is being more generally performed, and the results, so long as suitable cases are selected, are fairly encouraging. Mr. Cripps believes, from his own statistics and those of Helsey (New York Med. Journ., 1880), that from 10 to 15 per cent, of cases of rectal cancer treated by excision are permanently cured. The immediate mortality of the operation is given as 7 to 16 per cent. As regards the kind of colotomy to be employed in cases unsuitable for excision, there was much difference of opinion, but it was generally thought that the inguinal operation was the easiest to perform. Mr. Jessett advocates a modification of the inguinal operation; the sigmoid flexure is drawn well out, clamped, and divided across, the ends are washed out, and the opening of the lower one is invaginated so that its peritoneal coat can be stitched together. This closed lower portion of the flexure is then returned into the abdomen, and the upper end sutured to the wound.

Many surgeons consider that the risk of marked prolapse is prevented by drawing down the intestine and making the

artificial anus at the upper limit of the part exposed.

The inguinal operation is fully discussed by Mr. Harrison Cripps in the *Brit. Med. Journ.*, April 6, 1889. The chief points in his technique are the following:—

1. If possible, the operation is done in two stages—the bowel being opened a few days after it has been secured to the wound, and hence in the first part antiseptic precautions are advisable.

2. The wound (two and a half inches long) is made somewhat valvular by drawing down the skin at first; it is made nearly parallel with Poupart's ligament, and is so placed as to be bisected by a line drawn from the umbilicus to the anterior superior spine at a distance of one and a half inch from the latter.

The sigmoid flexure is then sought for and recognised by its longitudinal bands, the epiploic appendices, or the contained lumps of faces. The loop is drawn down in the manner referred

to previously.

4. The parietal peritoneum is united to the wound-edges by four sutures, and two provisional silk sutures are passed through the longitudinal muscular band opposite to the mesenteric attachment.

5. Seven or eight fine sutures are made to pass through the outer coats only of the bowel on each side, and to fix the colon to the wound. These are tied fairly tightly, and an antiseptic dressing applied with a firm bandage. Should sickness occur later, the nurse or patient is told to press the hand over the wound to prevent the sutures from giving way.

6. In the subsequent opening of the bowel (on the second to

6. In the subsequent opening of the bowel (on the second to the sixth day) no anæsthesia is required. The provisional sutures serve as a guide. Any subsequent contraction of the orifice must

be treated by a spring dilator.

Dr. Kroenlein (Correspondenz-Blatt für Schweizer Aerzte, Jan. 15, 1889) sums up his experience of this operation for cancer, having performed it twenty-one times. Two cases proved immediately fatal (one from septicæmia, the other from delirium tremens). In five cases it was necessary to open the peritoneum; in three, parts of the prostate were excised. All these patients did well. Kroenlein prefers iliac colotomy to the lumbar operation.

12. Colectomy for cancer.

Mr. Rendal Franks (Medico-Chirurgical Society, Feb. 26, 1889) performed excision of part of the colon in two cases of malignant disease—in one affecting the sigmoid flexure, in the other the transverse colon. One case ended fatally on the sixth day, the other was living at the end of five months. The very high mortality of resection of intestine for malignant disease, and the certainty of recurrence, are strong arguments against this operation.

13. The surgical treatment of typhlitis.

Mr. Treves (Brit. Med. Journal, Oct., 1889) opened a discussion at the Leeds meeting of the British Medical Association upon the subject of the treatment of typhlitis, and entered at length into the many questions involved. He pointed out that—from the point of view of treatment—typhlitis might be divided into three classes:—The simple form due to fæcal impaction or the retention of some irritating substance in the cœcum with a resulting stercoral ulcer; the form which ends in suppuration, and which nearly always depends upon disease of the appendix; and the relapsing form, in which the appendix is probably in every case involved. The pathology of the various conditions is considered in Mr. Treves' paper, and the clinical distinctions which separate them are discussed in detail.

In the matter of treatment the simple form yields, as a rule, readily to the ordinary medical measures. The second varietythat which leads usually to suppuration-demands surgical treat-

In these cases Mr. Treves considers that the use of the knife will very rarely be called for before the fifth day, and condemns very early operative interference. He also condemns absolutely the use of the exploring-needle, which is so extensively employed in these cases by American surgeons. The best situation for the incision cannot be settled in an arbitrary manner. It should be placed over the part of the inflamed area which appears to cover the seat of suppuration. This can be usually fairly well made out during an examination under ether, provided that such examination include a digital exploration through the rectum. desirable that the pus should be reached by the shortest route, and allowed to escape in the most direct manner. The most convenient incision is one made obliquely from above, downwards and inwards, just external to the deep epigastric artery, ending a little above and to the outer side of the middle of Poupart's ligament, and following the general inclination of the wound made for securing the iliac vessels.

An incision made in the right semilunar line will usually be found to be inconvenient, and an incision in the median line is

bad.

The less that is done after the abscess has been opened, the

better.

If an opening be found in the cæcum, it had better be left. The resulting fistula shows a tendency to undergo spontaneous cure, and the conditions present at the time of the operation are most unfavourable for any plastic procedure.

No plastic operation should, in these cases, be undertaken for the closure of the diseased appendix. A simple ligature suffices.

Mr. Treves' views with regard to the relapsing form of typhlitis, and the treatment of that condition by operation, are

dealt with in "Year-Book" for last year.

During the past year many cases have been published which confirm the views stated in the last "Year-Book" regarding the advisability of operative interference in cases of peri-typhlitic abscess, and the frequency with which such abscesses depend upon obstruction of the vermiform appendix. Mr. Treves' view that every case of relapsing typhlitis has its cause in the vermiform appendix has gained adherents. A discussion was held at the Medico-Chirurgical Society (June 11, 1889) on the subject, à propos of a case reported by Sir Dyce Duckworth and Mr. Langton.

A boy had presented the symptoms of suppurative typhlitis; an incision in the groin had shown the appendix to be blocked by a fæcal concretion, and it was accordingly removed. Some days later a median laparotomy was performed on account of a fresh abscess extending deeply into the pelvic cavity. This was drained, and the patient slowly recovered. Sir Dyce Duckworth was in favour of early exploratory incision if the symptoms pointed to extension to the vermiform appendix, and if they grew worse in spite of appropriate medicinal measures; "even at the worst less harm was likely to accrue to the patient by having his abdomen opened unnecessarily than by being left alone." The discussion partly turned on the best site for the incision, the right linea semilunaris being on the whole preferred. Mr. Treves emphasised the necessity of very carefully sewing up the opening of the appendix if it were excised, whilst pointing out that in some cases it was impossible to safely remove it.

Professor Vanderveer (Canadian Practitioner, July, 1889, p. 265) reports three cases of abscess around the accum, regards them as nearly always originating in the appendix, and advocates early operation. It is, perhaps, useless to protest against the introduction of such terms as "appendicitis vermiformi;" it is not at any rate so barbarous as "eustachitis," which is frequently

found in the writings of American aural surgeons.

For reports of abdominal section for tubercular peritonitis, see O'Callaghan (Brit. Med. Journal, 1889, vol. i., p. 596) and Walker (ibid., p. 136).

14. Abdominal section for penetrating wound.

This operation is steadily gaining adherents, it being admitted that the mortality has been materially decreased since its introduction, and that the intrinsic risk of an abdominal section for exploratory purposes is, or should be, if properly performed, very slight. It must always be remembered that to wait for symptoms of perforation of intestine to appear in a case of penetrating abdominal wound is greatly to decrease the chance of recovery, and M. Postempski (reported in Revue de Chirurgie, Sept. 10, 1889) advocates immediate exploration in all such cases. He reports his experience of twenty operations since May, 1888, with only three deaths. The intestines alone were found wounded in six cases, the intestines and mesentery in eight, the liver and bladder in one each. Particulars of the two latter are as follows :- (1). Wound of two and a half inches in the right hypochondrium; free harmorrhage. Operation half an hour later; the torn liver was sewn up, a large amount of blood cleaned out of the peritoneal cavity, and rapid cure resulted. (2). Wound of hypogastric region. with protrusion of bladder, escape of urine into the pre-vesical space. Thorough suture of the vesical wound, disinfection, catheter left in bladder. Recovery.

M. Postempski did not value the diagnostic method of Senn (inflation of the intestine by hydrogen gas in order to discover the

point of wound), and had never employed it.

15. Retrograde dilatation of strictures of the sophagus.

Just as the bladder has been opened in order to enable dilatation from behind of stricture of the urethra, so gastrotomy is now advocated as a means of treating stricture of the esophagus. Dr. Hagenbach (Correspondenz-Blatt für Schweizer Aerzte, No. 5, 1889) has operated thus in two cases, in both of which it had become impossible to pass bougies through the stricture from the mouth. In both, the first sound was introduced in the following manner:—The patient was made to swallow a shot attached to a thread, the latter was then drawn out through the gastric opening, and a silk ligature fastened to it, the latter being continuous with a bougie. The thread was then drawn up again. After a time the bougies could be introduced without a guide. In one of the two cases (a non-malignant stricture) the gastric fistula was closed ultimately; the other case died of cancer.

16. Loreta's operation for stricture of the pylorus. The first successful instance of this operation in England was reported by Mr. Hagyard, in 1887, his patient being now perfectly well. Mr. Treves (Brit. Med. Journ., May 18, 1889) records a second case with an equally happy result, the patient having been a man aged twenty-seven, under the care of Dr. Ralfe and himself. The patient had been a hard drinker for a long time, and three years before admission to the London Hospital had been kicked by a horse severely in the epigastrium. Almost constant vomiting, loss of flesh, and violent attacks of paroxysmal pain, with evidence of dilatation of the stomach, were the symptoms pointing to non-malignant stenosis of the pylorus. The abdomen having been opened in the median line above the umbilicus, the pyloric end of the stomach was found to be firmly adherent to the liver by old inflammatory adhesions, which could not be completely broken down. The stomach was incised, precautions having been taken to prevent escape of its contents into the abdomen, and the extremely tight pyloric orifice gradually dilated until it admitted two fingers. Lembert's sutures of fine silk were employed subsequently to close the wound in the stomach, and feeding was conducted by nutrient enemata until the ninth day. After the fourteenth the patient took all his food by the mouth. Healing of the wound was delayed by the patient's violent efforts during a solitary attack of vomiting after the operation, but with this exception he made an uninterrupted

recovery, and left the hospital on the twenty-fourth day.

Drs. Kinnicutt and Bull (Amer. Med. Record, June 8, 1889) report a case of successful operation for cicatricial stenosis of the pylorus by Loreta's operation. Feeding by the mouth was begun on the third day. Of eighteen cases tabulated by Bull, six died; of seven operated on lately by Loreta, two died from the immediate results of the operation. At the Congress of Italian Surgeons held this year a discussion took place, à propos of two cases of Loreta's own, as to the permanence of the results. It was held by some that a single dilatation of a pyloric stricture could only be as temporary in its effect as in the case of asophageal or urethral narrowing. The supporters of the operation could point to a clinical experience as to the complete and lasting relief following it, and to experiments on dogs which confirm their view.

Dr. Lauenstein (Deutsche Med. Wochensch., June 27, 1889), who says that Loreta's operation is not thought highly of in Germany, performed gastro-enterotomy with success in a case of pyloric stricture. Six months later the patient had gained forty-one pounds in weight. In another case of pyloric obstruction, due to tumour, he resected the pylorus, and the patient was able to

resume work as a locksmith.

17. Excision of the spleen.

Dr. Kocher (Correspondenz-Blatt für Schweizer Aerzte, Nov. 14, 1888) and Nilsen (Med. Rec., Dec. 1, 1888) report two cases of successful splenectomy, both in women—aged fifty-one and thirty-six respectively. In the former case the organ was of great size, and fixed by adhesions, during the separation of which severe hamorrhage occurred; in the latter the spleen was hypertrophied but "floating." Leukhamia was observed after the operation in one case, but there was no visible effect in the other as regards the composition of the blood or the general health of the patient. Dr. Fehleisen (Deutsche Med. Woch., 1888, p. 1,003) records two

Dr. Fehleisen (Deutsche Med. Woch., 1888, p. 1,003) records two cases of hydatid cyst in the spleen; in one the viscus was excised, in the other the cyst was sutured to the abdominal wall, and opened four days later. Drainage in the usual manner was followed by a complete cure. Bergmann, who operated in the first case, reports that no effect on the blood was produced by the operation, the patient making a good recovery. Other cases of successful splenectomy (one in a child aged three) were reported at the Congress of Italian Surgeons held at Bologna in 1889.

Dr. Krieger (Deutsche Med. Woch., 1888, p. 793) narrates an

extraordinary case of abscess in the spleen, cause unknown, which was opened and drained in the nipple-line. The patient, a cachectic man, aged thirty-nine, made a slow recovery.

18. Cysts of the pancreas.

As it is only within the last few years that cases of this rare disease have been diagnosed and treated, it may be worthy of note that Prof. Annandale records one successfully operated on (by median incision and drainage) in the British Medical Journal of June 8, 1889. The patient was a woman, aged 47, and a positive diagnosis could be arrived at before operation, since the fluid drawn off by aspiration was proved to possess a distinct emulsifying action upon fats. At the end of two months the fistula had almost closed. A reference to the recorded cases is given in the report referred to.

(Mr. Treves has had a similar successful case, not yet pub-

lished.)

 Excision of suppurating omental cyst.
 Mr. John Waldy (Lancet, Sept. 28, 1889) performed abdominal section for a large suppurating cyst of the omentum, and removed it after separating many adhesions (in doing this the colon was torn and sutured). The patient was a child aged eight, and a dermoid cyst had been suspected.

20. Total extirpation of the penis for cancer.

The disadvantages of this operation as usually performed are obvious. The large cavity left, into which urine trickles, the inevitable suppuration, the danger of septic absorption, and the slow healing of the wound should the patient recover, together constitute a grave reproach to the method as a surgical operation.

M. Montaz (Gaz. des Höpitaux, Aug. 27, 1889) has practised an improvement which, though probably not new, is worthy of note. One inch above the root of the penis the surgeon commences a racket-shaped incision, which curves off on to the left side of the scrotum from the dorsum of the penis, passes underneath and round the right side of the scrotum to its starting-point. The corpora cavernosa and bulb are then divided, their vessels being secured seriatim; in fact, the penis is enucleated as in excising a breast tumour. A straight sound or director is then introduced through the cut urethra, and its point pushed down towards the perineum, the "boutonnière" incision is made, and the edges are sutured to the skin. The large anterior wound can now be closed and dressed with antiseptics, and there is a fair chance of primary union, since the urine passes wholly through the perineum. In the case reported the result was very good, the patient living two years after the operation, and being found to be free of recurrence

of the cancer at the post-mortem. He was sixty-five at the time

of operation.

The whole subject of extirpation of the penis is treated with characteristic German detail by Dr. Keller in Bruns's Beiträge zur Chirurgie, 1889, p. 235.

21. Hernia.

Postempski (Wiener Med. Presse, No. 21, 1889) performed radical cure of a diaphragmatic hernia due to traumatism, through the enlarged wound in the eleventh intercostal space. opening in the diaphragm was exposed, its edges seized with forceps, the prolapsed omentum reduced, and the rupture closed with sutures. The patient made a rapid recovery.

22. Operations of the gall-bladder.

Two interesting cases of cholecystotomy are recorded by Mr. Page (Aug. 3, 1889), one illustrating the great difficulty met with in finding the gall-bladder when it has been narrowed and fixed to adjoining parts by inflammatory adhesions, and the value of the aspirating needle in its discovery.

23. Electrolysis in surgery.

M. J. A. Fort (Gazette des Hôpitaux, Sept. 26, 1889) treated a case of annular stricture of the rectum (of which the cause was unknown) by means of what he terms "linear electrolysis." The negative pole was used in the rectum, the positive one on the buttock. Five séances were required, the strength of the current being gradually increased up to 40 milliampères. The symptoms due to the stricture were completely relieved, though no statement is made as to the final state of the rectum. A few similar successes have been recorded by other surgeons, and the method is worth a careful trial, especially since in these cases the true value of electrolysis for stricture can be established. case of the urethra several fallacies may vitiate the reports of supposed cure of stricture by this method, but a stricture of the rectum low down can be examined from time to time, and the exact amount of progress well gauged. M. Fort has treated no less than 550 cases of urethral stricture by electrolysis, using a current of the strength of 15 milliampères, and being, as a rule, content with a single sitting. Severe pain was not often complained of. Relapse of the stricture, however, appears to have been fairly frequent, as is the case after internal urethrotomy. The best method of using the negative pole seems to be to have it made sufficiently narrow, and "to work it through one side of the stricture, a chemical process which, as a rule, does not require more than five minutes."

M. Lavanne (Abeille Médicale, Feb. 11, 1889) reports rather unfavourably after a considerable experience on the subject.

Mr. John Duncan (Brit. Med. Journ., Nov. 3, 1888) relates a number of cases of nævi and goître which he treated by electrolysis. Unfortunately, the method appears to be by no means certain in its effects, and may be said to be still on its trial.

24. Division of the inferior dental nerve.

M. Galignani (Gaz. des Hôpitaux, August 22, 1889), dissatisfied with the two recognised methods of division of this nerve—the intra-buccal one, and by trephining through the ascending ramus of the jaw—devised a fresh one, which he successfully carried out in a case of obstinate neuralgia. Through a short vertical incision he arrived at the posterior border of the ramus, detached the corresponding fibres of the internal petrygoid muscle and the periosteum, continued this process until he could feel the spine which marks the site of the inferior dental foramen, and then drew backwards into the wound the nerve on a hook, finally pulling it right out of its canal. He states that this method is an easy one, and involves damage to no important structures, though obviously a branch of the facial nerve is likely to be cut.

25. Nerve-grafting.

Mr. Mayo Robson (Brit. Med. Journ., Feb., 1889) being compelled to excise a considerable length of one median nerve (2½") in removing a tumour to which it was adherent, transplanted a corresponding piece of a posterior tibial nerve, just previously removed by amputation of the leg from another patient. Catgut sutures, passed right through the ends, secured the nervegraft in place. Thirty-six hours later there was some sensation in the area supplied by the median (this was probably due to collateral supply), and at the end of five weeks "it was perfectly restored, but there was some atrophy of the thumb-muscles." An interesting discussion was held on this case when shown at the Clinical Society, and doubts were expressed as to the complete success of the grafting.

26. Ligature of the innominate artery.

Mr. Spencer (Brit. Med. Journ., July 13, 1889) believes that by using a median incision, exposing the right common carotid, and following it as a guide down to the innominate, and ligaturing both the latter and the carotid with antiseptic silk, that the uniformly fatal result of the operation may be averted. Dr. Lewtas (Brit. Med. Journ., Aug. 10, 1889) ligatured the innominate and right carotid arteries in a case of wound of the subclavian artery

with a piece of gun-metal. The latter was removed a month after the accident, and such alarming hemorrhage followed that the above operation was considered necessary. The patient made

a complete recovery.

The much-debated subject of the treatment of wounds of the common femoral vein and artery is well discussed by M. Maubrac (Arch. Gén. de Méd., Jan. and Feb., 1889). His conclusions are briefly:—(1). If the common femoral vein is wounded and tied during the removal of a tumour the risk of gangrene of the limb is not great; but if both artery and vein are tied, its probability is much increased (nine cases of gangrene out of nineteen).

2. Wound of both artery and vein from accident should be treated, if possible, by antiseptic compression; the subsequent arterio-venous aneurysm will be less dangerous to cure. Immediate ligature of both vessels for this cause shows a percentage of 56

of gangrene.

3. If the wound in the common femoral vein be small, lateral ligature is worthy of trial. Twelve cases of this gave seven recoveries; of the five deaths, four were due to septicæmia.

4. Wounds of the common femoral vein alone (apart from the removal of tumours) are rare; and if the surgeon is obliged to operate on such a case, he should secure the vessel above and below, then applying moderate compression to the femoral or subiliac artery above.

27. The treatment of empyema.

Dr. W. Williams (Brit. Med. Journ., 1889) advocates the use of a long indiarubber drainage fitted with a valve at its distal end, the latter being kept in a bottle containing some antiseptic solution. The proximal end is fixed inside a metal tube and shield, secured by strapping and bandage to the chest-wall. By this means air is prevented from entering the chest, and by removing the valve end from time to time the pleural cavity can be washed out by the familiar syphon action. It may be added that this method does away with the risk of one awkward accident—the drainage-tube being drawn into the cavity. Three cases are given illustrating the advantages of this method, by which it would certainly seem that the lung is encouraged to expand, and to gradually obliterate the abscess-cavity. Its only novelty consists in the addition of the valve.

28. Aspiration and drainage of pulmonary abscesses and cavities.

Many papers on the above subject have appeared during the year, the cases often illustrating the great difficulty met with in opening and draining an abscess in the lung. The chief references are—Revue de Méd., Aug., 1888; Rüneberg, Deutsche Arch. für klin. Med., 1889, p. 93; The Practitioner, Dec., 1888; Quincke, Berl. klin. Woch.; Marsh, Brit. Med. Journ., Oct. 13, 1888; and Hodsdon, Edinb. Med. Journ., Dec., 1888.

Dr. Smith (Lancet, July 20, 1889) reports a case of drainage of a gangrenous abscess in the lung, in which very great improvement followed the operation.

ORTHOPÆDIC SURGERY.

By W. J. Walsham, F.R.C.S. Eng.,

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1. The operative treatment of club-foot.

EXCISION OF THE ASTRAGALUS. — Crawford Renton (Lancet, March 16, 1889, p. 526) reports two cases in which he successfully removed the astragalus for intractable talipes equino-varus. Both cases had been treated in infancy by tenotomy, etc. The shape and usefulness of the foot were completely restored; a tin splint was applied to keep the part in position during healing. Both patients did well. One was aged seven, the other two and a half.

Lund's operation of excision of the astragalus still seems to be increasing in favour for severe, relapsed, and intractable cases of club-foot. The Reporter has performed it several times during the past year, and can still speak highly in its favour. In the cases in which he has resorted to it a movable ankle joint has been obtained; the patients have been able to walk well without any pain, and, what is perhaps of more importance, have been able to dispense with expensive leg-irons. It cannot, however, be too strongly reiterated that these tarsotomies and tarsectomies should only be undertaken for intractable cases, and not till milder measures have been perseveringly and judiciously tried. regards removal of the astragalus, the whole of this bone, in the Reporter's opinion, should not be taken away, if partial excision is sufficient to allow of the foot being placed in its normal position without tension. In some cases excision of a wedge-shaped piece from the head and neck of the astragalus will be found quite sufficient for this purpose; when this will suffice, the integrity of the ankle-joint is of course preserved.

PHELPS'S OPEN INCISION.—Crawford Renton (Lancet, March 16, 1889, p. 527) also reports a case in which he performed Phelps's open incision for a severe case of club-foot. The wound healed

without any trouble, and with a single dressing, the foot being restored to its normal position. (For an account of Phelps's incision, see "Year-Book," 1889, p. 174, 1888, p. 172.)

2. A splint for use after tarsotomy.

Holt (British Medical Journal, May, 18, 1889, p. 1122) describes a new splint for fixing the parts after tarsotomy. It consists of a well-padded ring of iron, to which are fixed two parallel bars at right angles to the plane of the circle. To the distal ends of these bars is attached a foot-piece, which moves on hinges, and on the outer side of the foot-piece are two hooks. Supposing the tarsotomy to be done for varus, after the dressings have been applied, the ring of the splint is passed up the leg, and the foot is securely bandaged to the foot-piece at whatever angle it may be, for after the operation the foot still retains its deformity, partly on account of ligamentous attachments. The outer side of the ring and the outer side of the foot-piece are then connected by means of a rubber band ending in a chain to be hooked on to the foot-piece so as to have the tension required to bring the foot into shape. This may be altered according to circumstances. Mr. Holt claims that the advantages of the splint are: 1. The foot and leg are easily observed; 2. The foot may be securely fixed without in any way interfering with the wound : 3. The tension is continuous, and may be regulated; 4. The movements of the patient in no way interfere with its use.

3. Flat-foot.

Davy (Lancet, April 6th, 1889, p. 675) advocates the removal of the scaphoid for the cure of severe cases of flat-foot. He considered it a less severe operation than excision of Chopart's joint, as practised by Professor Ogston for similar cases. He claims for the operation that it restores the arch of the foot, reduces the dislocation, removes the pain, and gives fair capacity for walking. He admits that cases requiring the operation are extremely rare, Should any difficulty be experienced in ablating the scaphoid bone, he believes the easiest plan is to chisel the bone in a wedge-shaped form, and then carefully clear the bone out, leaving the cartilage on the head of the astragalus untouched, as well as the cartilage on the cuneiform bone. "No little spicula of bone must be left behind between these terms." be left behind between these two opposing sets of cartilage, to act as a foreign body in the new astragalo-cuneiform joint. The utmost cleanliness is maintained, but no special splintage is applied until the acute inflammatory stage is passed. Then the varying conduct of the case is left to the surgeon's ingenuity, his aim being to uplift the arch and maintain the astragalus head in correct apposition to the cuneiform bones. A plaster-of-Paris

foundation splint is set upon the leg, and webbing is put around the anterior half of the foot; according to the surgeon's discretion the webbing is fixed to the plaster bandage by means of "plaster dogs." These dogs are somewhat similar to timber dogs, consisting of a button at one end and a sharp hook at the other; a bradawl makes a slanting hole in the bandage at the joint required, the hook is inserted, and the button is ready to receive

the webbing.

Golding Bird (Lancet, April 6th, 1889, p. 677) recommends tarsotomy or tarsectomy, in which pain is the predominant symptom, after rest and the use of mechanical supports for flat-foot have been tried and have failed. He aims not so much at restoring the sunken arch as at removing the cause of the pain, which he thinks depends chiefly on the pressing together of the bones on the outer side of the foot. To do this he either ablates the scaphoid, or the scaphoid and a wedge-shaped piece of the astragalus. In the four cases in which he has performed one or other of these operations, in all was the pain removed, but in only one was the arch of the foot at the same time restored. In this case, besides removing the scaphoid, he sawed subcutaneously across the whole tarsus, so as to permit the front of the foot being adducted and rotated upon the back part of the foot. In the three remaining cases, although the same splint was used, apposition of the cuneiform and astragalus on the inner side could not be maintained, because of the integrity of the outer border of the tarsus.

With reference to the above operations, the Reporter can only repeat that during an experience of eight years in the orthopædic department at St. Bartholomew's Hospital, although several hundreds of cases have come under his observation, he has not hitherto met with a case, however much the bony deformity, in which the foot could not be restored by wrenching, under an anæsthetic, and placing it in plaster-of-Paris. It is true that the wrenching may have to be repeated several times, but in the end a most satisfactory foot can be obtained, and if, after restoration of the arch, exercises, massage, and electricity are persevered in, the foot can, in the end, be rendered not only a useful one, but can without exaggeration be said to be completely restored, both as regards shapeliness and utility.

4. Genu valgum.

THE TREATMENT OF GENU VALGUM AND OTHER DEFORMITIES OF THE LOWER EXTREMITIES BY MEANS OF THE SCREW CLAMP.— The clamp devised by Grattan for the purpose (British Medical Journal, Feb. 9th, 1889) consists of two curved arms, which can be approximated or separated as may be wished. These are covered with thick indiarubber, and are connected by means of a strong pivot. Attached to this pivot is the screw, into one end of which is fixed the appliance for making pressure, the other end terminating in a strong handle. This arrangement of the arms and of the screw, connected by a pivot, admits of pressure being applied at any point and counter-pressure at any two points that may be desired. Underneath this pivot is a nut by means of which the arms and the pivot can be firmly screwed together. In operating on a femur for genu valgum, in order to break it, a wedge-shaped appliance with rounded edge of polished steel is fitted to the screw. One curved arm of the clamp is placed on the outside of the femur just above the epiphysis, the other arm four or five inches higher up the limb. The screw with the wedge is applied two or two and a half inches above the condyle on the inner side of the bone. Having decided upon the exact position of the points of pressure, the clamp is removed from the limb, and must be firmly screwed together by means of the nut which is on the under side of the clamp. A wrench for the purpose is supplied by the makers. The clamp having been re-applied in the desired position, which has been previously marked on the limb, must be carefully held there by an assistant; the screw must be quickly and forcibly turned, compressing the wedge in on the bone; and in about twenty or thirty seconds it will be heard to break at the point of pressure. Should it not do so, at this moment a slight quick jerk of the leg inwards will complete the fracture. Care should be taken that no force be used which would tend to injure the external lateral ligament. In bow legs a flat appliance in place of the wedge is used. The clamp having been applied to the limb, the bones are forcibly pressed into the wished-for position.

Mr. Grattan says he has not used the appliance on any patient above twelve years of age, and seems doubtful whether the great amount of pressure then required to break the bone would be justifiable. In this the Reporter entirely agrees. Indeed, he has tried the instrument on a child of three both for genu valgum and for rickety tibiæ; but although so much pressure was applied that the skin became so tense that it seemed in danger of giving way, he was unable in both instances to fracture the bone, and the case had afterwards to be treated by osteotomy. At the same time, he is bound to say that the swelling of the parts very rapidly subsided—indeed, had almost disappeared in a few days' time. This instrument resembles in its chief points that known as Ferrari's, which was described in the "Year-Book" for 1889,

p. 182, which again is a modification of the osteoclasts of Robin

and Collin formerly referred to.

Hahn.—Modification of Macewen's operation for genu valgum (Berliner klinische Wochenschrift, No. 2, January 14, 1889, p. 37). The modification consists in first chiselling partially through the bone on the inner side, and then turning the limb and chiselling in a like manner on the outer side. Hahn considers it a great improvement on Macewen's operation, in that it can be more rapidly performed. While Macewen's operation in the case of hard bones takes an hour, 500 to 700 blows, and the frequent changing of the chisel, his method requires only 50 to 60 blows, and can be done in from six to ten minutes, without changing the chisel. He has treated eighty-five patients with genu valgum by 100 osteotomies without one case of suppuration.

The Reporter considers the additional incision on the outer side a gratuitous injury. He has performed a number of Macewen's operations himself, has seen it done very many times by his colleagues, and has found that as a rule it only takes a few minutes to chisel through the bone. He has never seen it necessary to employ 500 to 700 blows, or even 50 or 60. Nor at St. Bar-

tholomew's is the chisel changed.

5. Ankylosis.

Muirhead Little (Lancet, Feb. 2, 1889, p. 217) describes a splint for the treatment of stiff knee. It is a modification of the ordinary MacIntyre's or other simple extension splint by adding an arrangement that shall tend to push forward the heads of the tibia and fibula as the extension proceeds. "The splint is made of japanned sheet-iron with a sliding foot-piece to enable it to be accurately adjusted to the length of the patient's leg. The upper and lower parts of the instrument are connected on each side by a short steel bar, having a rack-and-pinion joint at either of its ends, turned by a key. The upper pair of these joints should be placed higher up than the condyles, in order to exaggerate the radius of the circle through which the head of the tibia moves. and thus to tend, in extending the limb, to force the articular surfaces apart. For the average adult the connecting bars should be three inches in length. The splint is applied so that the lower pair of rackwork joints are on the level of the tuberosities of the tibia. The knee is held by a square leathern knee cap. while the leg, foot, and thigh are secured to the splint by strapping and bandages. If necessary, the hamstrings will have been first divided. Extension is then made by turning gradually the two upper racks, while the lower pair are used to keep the splint adjusted to the leg, and imitate the natural turning of the tibia

already referred to. When the splint has once been applied, it should only be removed when absolutely necessary. By varying the degree of flexion and extension of the rack the splint is adjustable to any degree of subluxation and flexion, and can be used to rectify displacement in cases where, although the limb is fully extended, the tibia is subluxated, by applying it with the upper joints flexed and the lower extended, so as to place the two segments of the instrument in echelon-to borrow a military phrase.

6. Operative treatment of congenital dislocation of the hip.

Teufel (Deutsche Zeitschrift für Chirurgie, Band xxix., Heft 4, 1889) resected the left hip of a patient suffering from this affec-He had in addition a dislocation of the head of both radii, right genu recurvatum, congenital dislocation inwards, and ankylosis at Lisfranc's joint on the right side, and dislocation outwards at the astragalo-scaphoid joint on the left side. At the operation the capsule was found thickened and ten centimetres long; there was no ligamentum teres to be discovered. The head of the bone and a piece of the trochanter were sawn off, but it was not till after some weeks that Teufel succeeded by extension in lengthening the shortened muscles, tendons, and ligaments; six weeks afterwards a wedge-shaped piece was cut out of Lisfranc's joint. The patient presented himself eighteen months later; he could walk four or six miles without a stick, and the functions of the hip-joint were perfect,

 Hygienic school desks and forms.
 Féret (Revue illustreé de Polytechnique Médicale, ii., Feb. 28, 1889, p. 62) has constructed a desk at which the child can work sitting or standing, to take the place of the desk customary in the German schools. The table surface can be fixed at any desired height; it should be at the level of the epigastrium. Whilst writing, the left fore-arm is to be laid to the full extent on the table surface, the right arm to only just above the wrist. The book lies parallel to the front edge of the desk; the child sits or stands, not straight in front of it, but with the left side forward. When standing, the left foot is advanced. By means of the opportunity which this desk allows of alternating sitting with standing, the disadvantages of long-continued sitting are avoided.

8. Angular curvature.

RESECTION OF THE LAMINA FOR SEVERE ANGULAR CURVATURE WITH PARAPLEGIA. - Arbuthnot Lane (Brit. Med. Journ., April 20, 1889). The patient was a boy, seven and a half years old, who

had had paralysis of sensation and motion for ten months. the time of the operation he could control his motions more or less perfectly, and was conscious of a desire to micturate; it was, however, necessary to attend at once to his wants, otherwise he passed his water into the bed. He had no pain. The curve was most marked at the fifth dorsal, and was very abrupt and prominent. There was some rotation as well as angular deformity. The soft parts were rapidly removed from the spinous processes, laminæ, and inner portions of the transverse processes, and the spinous processes and laminæ of the fourth, fifth, and sixth dorsal vertebræ were removed with bone forceps. The spinal canal being opened, the dura mater was exposed, there being no granulation or cicatricial tissue obvious, nor was there any of the fat which normally exists in this position. The dura-matral sheath when first exposed was flaccid, and the cord felt thin and soft; at first it did not pulsate, but after a time the pulsations, though slight, were obvious. The body of the fifth dorsal vertebra seemed to be abnormally near the lamine of the adjoining vertebræ, and it appeared that the cord had been forcibly compressed between these bony points. As there was nothing else to be felt, there was no indication to proceed farther. The wound was then closed, a small drainage tube being fastened into its lower end, and a dressing of alembroth wool applied. The dressing was changed on the following day, when the drainage tube was removed. The wound did not require another change of dressing. The child made an uninterrupted recovery, and at the time of the report could move his legs freely.

This operation can only be required in very exceptional cases. It must be in the experience of all, as it is in that of the Reporter, that with absolute rest in the recumbent position by far the majority of cases of angular curvature with paralysis

recover completely.

9. Caries of the cervical vertebræ.

Schreiber (Münchner Med. Wochenschrift, p. 43, 1888) has devised an apparatus which he has used with good result in cervical caries. It consists of a padded metal collar, connected behind to an upright, which is secured to a metal plate fastened on the back of a well-fitting corset. The metal plate can be shifted higher by means of a screw, so that extension of the head is continuously and increasingly exercised.

10. The treatment of lateral curvature.

A NEW METHOD OF TREATING LATERAL CURVATURE OF THE SPINE. Fischer. (Berliner klin. Wochenschrift, No. 39, 1888.) In the most common forms of lateral curvature, i.e., those in which

the convexity of the dorsal curve is to the right, Fischer uses the following exercises for about three-quarters of an hour three times daily: The patient, stooping forwards, supports his arms, bent at a right angle at the elbow-joint, upon an upholstered chair in such a way that the spine assumes a horizontal position. A rubber band, about 8 centimetres wide, is then passed round the body over the most prominent part of the curve, and from this band or girdle a considerable weight is suspended on the Weakly children of 8 or 10 years bear even at the affected side. first trial a one-sided weight of 8 to 10 kilogrammes, and this is increased on subsequent occasions as much as the strength of the child will permit. In the course of a week or two a weakly child can bear 30 or more kilogrammes, strong persons 80 or more. The weight must be borne as long as the patient can support it; at the beginning of the treatment for a few minutes, later on for a quarter of an hour or more. The respiration is slightly impeded by the constriction of the elastic binder, but in no injurious degree. The effect which is produced by the wearing of the weight, says Fischer, is obvious. The whole trunk is twisted round towards the side on which the weight is hung; the backwardly projecting ribs of the convex right side are flattened, the depressed ribs of the left side are pushed backwards. The laterally displaced vertebræ do not appear after the first practice to undergo any change of position, but the sternum with the costal cartilage is in its lower part markedly pulled over towards the left, though after taking away the weight it gradually assumes its former position. The elastic band becomes uncomfortable if it is allowed to remain at one spot on the body; it should therefore be moved every few minutes a little higher or a little lower. If the elbows become sore or tired with leaning on them, the child can still keep her body in the horizontal position by supporting herself with her hands upon a somewhat lower chair or stool. Patients who, as a result of decicient exercise, or of wearing stiff supports, have rigid and unyielding spines, can practise this exercise with great advantage by moving about the room with the weight on, keeping the body still in the horizontal position, but supported by the hands, which are made to rest on an ingenious contrivance consisting of wooden frames provided with handles of sufficient height. These can be pushed along in front of the patient as she walks. Weakly patients soon learn to bear 10 or 15, stronger ones 50 kilogrammes or more for a quarter of an hour. After going through these exercises the patient rests a minute or two, then practises gymnastic exercises for a short time. The exercises are specially

directed to the strengthening of the muscles of the column: thus, with the knees straight, the child stoops till she touches her toes with her fingers, then straightens herself again; holds weights of from 2 to 5 kilogrammes in each hand, with the body bent forward and the hands outstretched; lifts heavy weights with one or both hands, etc. The next exercise consists of the following:—A cross-bar fixed to properly constructed uprights, 80 to 100 centimetres high, 50 or 60 centimetres long, and provided with two cushioned projections 30 centimetres long and 15 broad attached at each end, is placed—assuming the convexity of the curve is to the right—at the left side of the patient, who then assumes the same position as in the first exercise. The one projection comes against the left shoulder, the other against the left hip. The elastic band is now put round the body as before, and to its under surface a cord is attached, which is then passed under the patient and over the cross-bar, and hangs down, bearing a weight of from 20 to 60 kilogrammes fixed to its end. The patient stays in this position as long as she can bear it, which is about ten to twenty minutes. Fischer says that by this exercise the trunk is twisted on its long axis to the right, and at the same time the deviated vertebræ are, by the strong pull in the horizontal direction, brought nearer the middle line. After this several gymnastic exercises follow, to strengthen the muscles of the shoulder and neck. Fischer makes the patient elevate and depress first one shoulder-blade, then the other, one or two hundred times, the head and neck, he says, taking a better position by these exercises. For strengthening the body-muscles rotatory movements of the trunk are made on its long axis, and various sorts of exercises are performed for strengthening the abdominal and pelvic muscles.

In using the exercises with the weight, not only is the curvature influenced, but the compensatory curves, if present, are also increased rather than improved. To obviate this bad effect, which Fischer says only occurs in the minority of cases, he applies a counter-weight after the same method to the compensatory curves, but, of course, acting in the opposite direction. Where these additional weights are used, a less number of kilogrammes, ten to thirty, are employed for correcting the compensatory curves. Weakly patients have to support in this way a collective weight of forty to eighty kilogrammes, the stronger ones a hundred or more. This exercise is continued ten to twenty minutes, according to the strength of the patient. In the next exercise an elastic band is put round the body as before, and a cord attached above, which is carried over a pulley secured to the ceiling and hangs

down bearing the weight. The effect is similar to that of the other exercises, except that the direction of the weight, instead of being, as in them, downwards or horizontal, is vertically upwards. The forwardly projecting ribs of the left side are thus pressed backwards, and a further corrective position of the vertebrae effected. To prevent the patient being drawn upwards by the weight, she is made to grasp with her left hand a counterweight, such as a bag of sand or the like. Where there are compensatory curves, additional compensatory weights may be applied above or below the primary curve as in the former exercises. There is yet another exercise which is done with the body in the erect position, either standing or walking. The elastic band is passed round the chest on a level with the nipples, across the back, over the right shoulder, and brought forwards over the right side of the neck, where a weight of ten to twenty-five kilogrammes is attached. After a few minutes it is seen that the right convex prominence of the upper ribs is flattened, and the oblique carriage of the neck improved. The patient bears this weight five to ten minutes. Each patient who comes under treatment must go through these several exercises, and those are persevered in which appear to be most necessary for her case. . The question whether lateral curvature can in this way be corrected, is answered by Fischer in the affirmative. From the first day of treatment, he says, an untwisting of the whole body takes place, and this is the more quickly and thoroughly effected (1), the softer and more unyielding the bones are; and (2), the heavier the weights the patient is able to bear as long as possible. No injurious effects to the internal organs follow. Fischer has never seen a relapse, but thinks this most likely to occur in children under fifteen. Since 1887 he has treated twenty-five cases in this way. The slighter cases were cured in a few weeks; some of the more severe are still under treatment. No case has yet proved refractory. Even in the worst cases so much can be done that little or no disfigurement remains. Fischer thinks if we compare these results with those obtained by the treatment by corsets and jackets, we shall join him in the cry: "Fort mit den Skoliosencorsets."

Beety (Centralblatt für Orthopædische Chirurgie, July, 1889) has constructed an apparatus for applying Fischer's weight method in the treatment of lateral curvature. It is intended to facilitate the application of the weight with the minimum of annoyance to the patient, and with as little loss of time to the surgeon as possible. It consists of an oblong frame, at each corner of which is fixed an upright. The uprights on the longer side of the frame are connected with each other by two parallel bars, one whose

and one below. The two lower bars bear an uphoistered plank on which the patient supports herself with the elbows. On one of the upper bars are fixed two movable cushions, one on either end, for the lateral support of the shoulder and hip. These can be shifted to either the right or the left bar, according to the direction of the curve. A second hip-cushion is fixed on the opposite parallel bar, and by a simple contrivance can be made to approximate the opposite hip-cushion, and thus as it were grasp the pelvis when the patient is in position. Further, in order to prevent the patient, when the weight is attached, sinking forward, a softly padded iron plate eight centimetres broad is connected with one of the front corner uprights, and can be arranged at any height, and turned to the right or left. When the patient is about to use the apparatus, the plank for the support of the elbows must be fixed at such a height that the trunk takes as much as possible a horizontal position. The patient, lightly clothed without corset, supports herself with her elbows, her upper arms perpendicular, her legs the same, the fore-arms fixed and laid their full extent on the cushion, the hands holding a small cushion for the head. If the spine is curved with its convexity to the right, the lateral supports for the shoulder and hip are put upon the left side. Instead of now encircling the body with the elastic band, as in Fischer's method, the pressure in Beely's apparatus is applied by means of straps, which are attached to the upper parallel bar on the side where the cushions are fixed; from thence they pass over the body, and hang down bearing the weight on the other side of the patient. According as the weight is to be spread over a smaller or greater extent, one or two straps are passed, in the present case from left to right, over the most projecting part of the curve, and the prescribed amount of weight then attached. If the force is to act in a horizontal direction, the side bar which bears the straps is raised higher than the level of the patient's back; but if the force is directed principally to act upon the rotation of the spine, the side bar is placed on a level with the back, and sometimes lower. If in weighting the chief curve the column yields so that compensatory curves arise, or if present are increased, these must be combated by corresponding changes in the weight. The treatment is begun by bearing the weight for about ten minutes at a time, followed by a pause of fifteen to twenty minutes. This is repeated three to five times, so that the treatment takes an hour and a half to two hours and a half daily. During the pauses, the patient lies on an inclined plane. The weight is increased as quickly as possible, and often in a short time the patient can

bear sixty to one hundred kilogrammes. Although this method does not seem applicable to all cases, Beely considers that it is one with which we can work more powerfully and continuously than with almost any other. The improvements of form can not only be plainly seen during the wearing of the weight, but even some time after it has been taken off.

Wolfermann (Centralblatt für Chirurgie, No. 42, 1888, p. 671) has devised a new corset for the treatment of lateral curvature. It consists of two separate parts, a pelvic and a thoracic, which are connected in such a way that the thoracic portion can be made to rotate on the pelvic by means of an upright pivot working in a socket, whilst at the same time, by means of a mechanical contrivance, the thoracic can be moved upon the pelvic both laterally and in a forward and upward direction. The pelvic portion which rests on the hips, and has openings corresponding to the iliac crests, bears on its posterior surface in the middle line an upright which serves to connect the two parts. thoracic portion surrounds the thorax especially at its lower part. The revolution of the thoracic portion upon the pelvic is effected by a spring fixed to the pelvic portion; the tension of this spring can be regulated at will. When the corset is about to be put on, the two portions are fixed together by means of a fixation screw. But when it is on and the fixation screw loosened, the spring acts with full effect upon the ribs, tending to carry them forward and thus unroll the rotated spine. The upward and downward movement of the thoracic portion has a double object; thus it allows for increasing the length of the corset as growth proceeds, and for shifting the thoracic portion upwards, which is often of importance after the corset is first put on, especially at the commencement of the treatment.

SURGICAL DISEASES OF CHILDREN.

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PROBABLY the most important works that have appeared since the publication of the last "Year-Book," so far as regards this section of the volume, are :-

The Diseases of Children, by Dr. Ashby and Mr. Wright, of Manchester:

Dr. Henoch's Lectures on Children's Diseases, which has been translated for the Sydenham Society by Dr. John Thomson, of the Hospital for Sick Children, Edinburgh; and

The Cyclopædia of the Diseases of Children (vol. i.), edited by

Dr. Keating. Philadelphia.

The first-named volume opens with a practical and interesting account of the physiology of infancy and childhood. and then goes on to deal with the diet, the digestive system, and the diseases of that system. This takes the reader up to Chap. X., dealing with hepatic diseases; and then come three chapters on the respiratory apparatus. Here one regrets to see neighbouring paragraphs headed "Membranous Croup" and "Diphtheritic Croup." The Reviewer at least would have preferred that less prominence should be given to the word "croup," which is after all but a symptom. This "croup" is a word of which the public are very fond, chiefly, perhaps, because of its vagueness; but it would be of the greatest advantage to the surgery of childhood if it could be altogether discarded. However, the way in which the subject of the laryngeal obstruction is dealt with by our authors leaves nothing to be desired.

The relative merits of tracheotomy and intubation are con-

sidered, and to the disadvantage of the latter.

To pass the thirty-nine chapters in the valuable appendix in review is here impossible, and I must content myself with the bare statement that the book is full without being diffuse; strong in practice, yet without neglect of theory, and altogether a

valuable addition to the practitioner's library.

Of Henoch's Lectures, only the first volume has as yet appeared ; it is translated from the 4th edition (1889), and, though dealing for the most part with medical subjects, it contains many surgical references. "It is only because my material has been so exceptionally large and so carefully observed that I dare claim for this work, based as it is almost entirely on my own experience, the title 'Handbook for Practitioners and Students.'"

In alluding to the subject of the sterno-mastoid tumour, so frequently met with in infants, he bears out our own experience that "almost all the children affected by it have had an abnormal presentation at birth, which either delayed the labour

or rendered artificial assistance necessary."

He regards the swelling as a hæmatoma, the result of partial laceration, and, says he, "I have every reason to assume this as the original cause in a case of torticollis in a girl of six years of age, which dated from the first weeks of life." As regards the value of local treatment, he says that iodide ointment may be used because "you may thereby perhaps gratify the anxious mother and insure yourself further observation of the case."

Of the swelling of the breasts in new-born infants, associated with the formation of a milky or purulent secretion, he gives a full account. A valuable section deals with retro-pharyngeal abscess, in which he says, "In spite of the large amount of clinical material at my disposal, I have records of only (!) about

sixty-five cases,"

Dr. Thomson is to be congratulated on the way in which he is bringing out the Lectures, and the Sydenham Society on its selection both of author and translator.

The first volume of the Cyclopædia of the Diseases of Children, of 1,000 pages, has just appeared. The object of the Editor has been "to include not only the medicine and surgery of pediatrics, but also all the specialities tributary to it." The work is a

collection of monographs.

The subject of the Anatomy of Children (forty pages) is by Dr. McClellan; that of Physiology being by Dr. Angel Money. Diagnosis is by Dr. Finlayson. These, together with essays on Practical Bacteriology, Maternal Impressions, Diseases of the Fatus, and other "general subjects," take up nearly 400 pages, after which come the Fevers and Miasmatic Diseases.

Monographs by such well-known authorities as Alexander Collie, Lewis Smith, Waxham, Cheadle, and Bartholow, occupy no inconsiderable portion of the text, and give full assurance of the practical value of the work. So far as it goes, it is indeed a Cyclopædia, and a work that one would be glad to have upon one's shelves.

1. Tubercular disease of the joints. Dr. Riedel (Centralbl. für Chirurg., May 18, 1889) is of opinion that tubercular disease of the wrist and ankle in childhood demands operation, but that when the shoulder, elbow, knee, or hip is the seat of the disease interference should be postponed or avoided. Such a classification appears somewhat artificial, but may not improbably have been suggested by his individual experience. For my own part, I should pick out the knee as the very joint for which the operation of erasion is most suitable, and, as noted in the "Year-Book" of 1889 (p. 193), the hip is the joint on which some surgeons claim the most con-

spicuous triumphs for the operation.

An important feature of Riedel's paper is his advice against the use of drainage-tubes in these operations. The same spirit is beginning to pervade English surgery also, and, so far as one can foresee, the time is coming when the use of drainage-tubes in operations generally will be avoided. The cases which were recently shown by the Leeds surgeons at the infirmary gave ample evidence, amongst other things, of the over-estimation in which drainage is generally held. Mr. McGill and others are now in the habit of resecting the knee, and performing arthreetomy without any provision for drainage; so also is my colleague Mr. Bernard Pitts. But to insure success in this new departure it need hardly be remarked that the most scrupulous care must be taken as regards thoroughness in the operation, and as regards

cleanliness in carrying it out.

Mr. McGill and other Midland surgeons have discarded Gant's excellent splint and other rigid supports after excising the knee, in favour of Gooch's kettle-holder splinting, which they cut out and arrange over an ample padding of absorbent wool.

Joseph Lister, I believe, also uses this material.

The operation of arthrectomy, at least as introduced to us by Wright, of Manchester, has been of late widely practised, and the time is coming when it will have to be weighed in the balance of practical surgery and its value duly appraised. The bare report of an operation does not suffice in forming an estimate of its lasting value. For though surface wounds may be soundly healed when a child is sent out of hospital "cured," the deep parts may be in an absolutely untrustworthy condition. Thus far we have every reason to be satisfied with the operation of arthrectomy. for, when thoroughly carried out, it removes from the joint every vestige of disease, and places the patient, it may be, beyond the risk of general tubercular infection. But possibly, if we could have a general and critical review of all the children who, during the last few years, have had their tubercular joints scraped out, we might feel considerable disappointment with the result. And one reason for this would be, I think, that our anticipations of the gain to be accomplished by the procedure have been too optimistic, whilst too much has sometimes been attempted in the operation itself, especially as regards the knee-joint. Qui trop embrasse mal iterint is an adage which applies well to these cases; and if a surgeon, whilst operating, has constantly in his mind the expediency of attempting to secure a fair, or even a partial, range of movement to the joint, he runs a double risk of failure. For, in the first place, he is apt to be halting in his attack upon the articular structures, and, secondly, he sets about moving the joint when perfect rest is still the one thing needful.

Increasing experience of the operation is leading me to these conclusions: that, except in very slight cases—such, indeed, as used formerly to recover and still might do so, without operation—future movement in the joint should neither be aimed at nor desired, and that to secure the best result in the greatest number of cases, a thin slice should be taken both from the femur and tibia, so that solid synostosis may ensue. Thus, in all except slight cases, "arthrectomy," as applied to the knee at least, will simply mean a most economical excision, with a thorough removal of all

diseased tissue from the joint and its neighbourhood.

2. Diphtheria.

Dr. W. C. Caldwell (Archives of Pediatrics, Feb. 1889, p. 97) suggests that if the local infection in diphtheria be accompanied by a pseudo-membrane which covers over the invading bacteria, the indications for treatment are the prompt, frequent, and effective application of remedial agents which will remove the pseudo-membrane, so that the bacteria can be reached, and which will also arrest the growth of the bacteria.

He then alludes to the value and danger of the mercuric spray, and urges the use every half-hour, or every hour, of a spray which is composed of papain, hydro-naphthol, hydrochloric acid, and water, and gives details of seven cases in which he success-

fully used this spray.

The question which I frequently ask myself, and physicians and surgeons whom I meet "from the other side," is:—Is not diphtheria, as met with in America, usually a less virulent disease than it is with us? I think that it must be. A similar

opinion has also been arrived at, we are told in the Western Medical Reporter, by Prof. Thiersch, of Leipsic, who ascribes his lack of success in the treatment of larvngeal diphtheria by intubation, as compared with American surgeons, to the fact of his being called upon to deal with a different type of disease; he opines that the diphtheritic membrane on the American continent is less thick and tough, and that the constitutional symptoms of the disease are milder. He has given intubation a thorough trial, extending over a period of seven months, but with results so unsatisfactory that he has resumed his former treatment tracheotomy-with which his percentage of recovery is about fifty. But should Prof. Thiersch's percentage of success continue thus high-as we devoutly trust it will-we in London may be inclined to surmise that diphtheria is running a milder course also in Saxony than it is in England.

M. Gaucher (Brit. Med. Journ., May 11, 1889), at a recent meeting of the Société Médicale des Hôpitaux, mentioned the fact that he had cured 17 cases of serious diphtheritic angina by ablation of the false membranes and antiseptic cauterisation of the mucous membrane. He added that M. Dubousquet-Laborderie (St. Ouen) had treated 81 cases by this method in four years; four of the patients succumbed to "croup"; they were under the age of five, and the false membranes had already extended to the larynx when the treatment was applied. There were no toxic symptoms in any case, although the urine was black, showing that the treatment acted generally as well as locally. M. Gaucher employs a solution of 5 to 10 parts of crystallised carbolic acid in 10 parts of alcohol. After scraping the throat thoroughly with a short-haired brush he applies the solution. This operation is repeated three times daily, and every two hours the mouth is washed out with a 1 in 100 carbolic acid solution.

An interesting report of an outbreak of diphtheria at the Hôpital des Enfants-assistés de Paris is given by Dr. Sevestre in Le Lyon Médical of Feb. 17, 1889. The outbreak had been terrible, seventy-eight cases having occurred between January and June, 1888. The staff were of opinion that it was due to foul linen. The children attacked had been in distant parts of the building, and there had been no communication between The administration then, at the request of the staff, supplied a hot-air disinfecting stove, which was capable of generating a heat of 120° (248° F.); all clothes and foul linen were thenceforth thoroughly disinfected, and the stove-attendant was kept from contact with the nurses and residents. As if by magic, the scourge disappeared, not a single case occurred during

three months — a remarkable and gratifying phenomenon. Then, suddenly six children were seized, all of whom succumbed. For this outbreak some foul linen which had, unfortunately, escaped disinfection was blamed. Care was therefore redoubled, and, though desperately bad cases of diphtheria were subsequently admitted from without, no further development of the disease within the building occurred. Every child admitted into the hospital was given a disinfecting warm bath before being admitted to the ward, irrespective of the nature of his illness.

3. Early operations for hare-lip and eleft-palate.
Dr. Julius Wolff (Archiv für klinische Chirurg., Band xxxviii., 1888) records a case of a wide and complete labial and palatine cleft, on which he commenced operative procedures so soon as two days after birth. Having in successive stages cured the hare-lip, he began, before the infant was six months old, a series of operations upon the palate which were eventually crowned with success. He rightly urges that the greatest care must be taken against the loss of blood in early operations, and with this in view he advises that only a slight amount of the cleft be dealt with on each occasion.

My own experience with staphyloraphy at a very early age is limited, but I have operated with complete satisfaction upon a cleft of the soft palate at six months. The satisfactory account of Wolff's method will be likely to induce surgeons generally to follow his example. For beyond question it is a great matter if the cleft can be closed before the child begins to talk. The earlier the cleft is closed the better for the clearness and tone of the future voice.

4. Foreign body in a bronchus.

Mr. H. W. Page (Brit. Med. Journ., July 20, 1889). The records of cases in which foreign bodies are extracted from the bronchi are always interesting and instructive. Mr. Page's case is that of a boy who was catching pebbles in his mouth, when one of them suddenly disappeared. He had an immediate and violent fit of coughing, and from that time onwards he had been frequently subject to similar attacks. The cough was always worse when he was sitting or standing up, and when he lay on his left side more than when he lay on his right side or back. He had some pain in the episternal notch. As to the diagnosis there could be no question, for the breath-sounds were markedly diminished in the whole right chest, in the subclavicular region more especially; and at the point over the centre of the second right costal cartilage there was to be heard a curious blowing, the left side of the thorax expanded better than the right, the breathing was

puerile. The boy was in so little distress on his arrival that no immediate attempt was made to dislodge the stone; but on July 10th tracheotomy was performed, and the stone was at once felt with a long curved probe about five inches below the tracheal With hooks, with coiled wire, and with various-shaped forceps attempts were made to seize the stone, but it was firmly fixed, and so slippery as to be quite immovable. After an hour and a half the attempt had to be abandoned. The tracheal opening being deemed too small, another ring, the fourth, was divided. and the opening was still further widened by stitching its margins to the skin. Nevertheless, the operator failed to move the stone. The boy, fortunately, seemed none the worse for this manipulation, and, therefore, on the next afternoon he was again anæsthetised, when a much more forcible use of the long probe succeeded in dislodging the pebble. Violent coughing ensued, but the tracheal orifice seemed to be even now too small, and the weight and smoothness of the stone were such as to make it fall back into its old place. The stone moved rapidly up and down, but it was caught at last in a pair of fine forceps held open in the trachea. It was an oval and smooth cornelian, of just such size and shape as to become fixed edgewise in the bronchus, and yet allow some air to pass on either side of it. The boy rapidly got well.

The Reviewer holds the same opinion as Mr. Page, that the right thing in all such instances is to persevere day by day until the body be dislodged, for the manipulations of the operator are a source of far less danger than the continued lodgment of the foreign body. The records of cases clearly show that it is only a question of time when the consequences become serious and life is placed in danger. The foreign body must somehow be got out; and towards this end, a free opening in the trachea, and the stitching of its edges to the skin, give the surgeon great additional facilities in his efforts at extraction.

Mr. Bryant, at a recent meeting of the Medical and Chirurgical Society, after giving the clinical record of a boy from whose left bronchus he had extracted the mouthpiece of a trumpet, remarked that in cases of this sort it sometimes happens that it is not until secondary changes had taken place in the lunga, caused by the presence of the foreign body, that a certain diagnosis could be made from subjective symptoms, and that because of this, delay in carrying out a correct treatment so often occurred that fatal cases forcibly illustrate the evil of procrastinating, and suggest the expediency of performing tracheotomy in all cases in which even a suspicion of the presence of a foreign body in

the trachea or one of its branches finds support either from the history of the case or from the physical phenomena present; that the risks of tracheotomy cannot be regarded as great, whereas those that attend the presence of a foreign body in the lung are always very grave. Certain it is, that the earlier the operation is performed the better.

5. Pott's paralysis treated by suspension.
Dr. S. Weir Mitchell (Internat. Journ. of Med. Sci., May, 1889). The first ten pages of this issue are occupied by an able essay on the treatment of paralysis which is secondary to angular curvature. The common history of mild cases is one of motor loss (with little or no diminution of sensation) and of excess of reflex, the regulating influence which should be brought by fibres descending from the brain being lost. When reflexes cease to exist it must be assumed that the reflex loop has been broken by the invasion of degenerative changes.

"For many years of my life, carried away by modern authority and example, I put all cases of Pott's paralysis at rest, used tonics and oil, and cauterised the back. In most instances this answers well. It is slow, but it suffices. The spinal curve, left to itself, solidifies—the palsy fades away. The treatment is wearisome and confining, but at last the patient gets up and puts on a brace. After some time I met with two cases in succession which did not get well at all, and about this time I found one or two children who were sure to die of tubercle if left in bed."

Alluding by the way to the treatment of the spinal curves due to caries, Dr. Weir Mitchell is of opinion that, with rare exceptions, all cases of the deformity are best treated by early use of suspension, in conjunction with other means. Whilst reading this essay one cannot divest oneself of the thought that Dr. Mitchell is approaching the subject of Pott's disease rather from the standpoint of the neurologist than the surgeon. cervical caries, extension from the head is imperative." How would John Hilton, the Apostle of Rest, have regarded this sentence? This is the way in which he, John Hilton, alluded to a case of cervical caries:—"Being paralysed, or nearly so, she could offer no resistance to my purpose, and I shall never forget the weight of the responsibility when I took hold of her, desired the pillows to be removed from her back, and, supporting her head and shoulders in my arms, slowly placed her upon her back, nearly flat upon the bed, with her head upon a thin pillow, some additional support to the hollow of the neck, and two sand-bags, one on each side of the head, to prevent lateral or rolling motion. Here was a patient in the greatest possible danger, and I do not

hesitate to express the opinion that if the head had fallen forward, say half an inch, she would have died in an instant."

Dr. Mitchell goes on to say that suspension should not exclude the use of frequent cauterisation, and that he has seen suspension succeed where frequent use of the hot iron had failed.

It is the opinion of the Reviewer that if suspension and cauterisation are for the future to form part of the routine treatment of the disease, we shall be taking a step, a march I might say, rearwards. I have no hesitation in saying that absolute and uninterrupted rest, flat in bed, is the treatment for vertebral caries. If the truth of this important statement were more generally recognised and acted upon there would be very little angular curvature and still less secondary paralysis to need special neurological treatment. I do not wish to imply that suspension is never to be used when secondary paralysis has come on as the result of inflammatory pressure upon the anterior columns of the cord; I think otherwise. But even then the cases in which suspension can do what rest would have failed to accomplish must be exceptional.

Amongst the conclusions at which the author has arrived are the following: — That suspension should be used early in Pott's disease, and that, used with care, it enables us slowly to lessen the curve. That unless there is great loss of power, certain accessory means, which are described, "enable suspension, especially in children, to be combined with some exercise."

I quote these generalisations of this justly celebrated physician and neurologist, in order that I may express, concerning them, my most respectful but uncompromising disapproval.

6. Vesical calculi in boys.

This important problem has by no means yet reached a satisfactory solution; boys are still being submitted to suprapuble lithotomy, whose small calculi might promptly and efficiently be

dealt with by lithotrity.

Dr. Alfred Lendon (Australasian Medical Gazette, Sept., 1888) reports three successful cases of the high cutting operation in boys—all performed within twelve months of each other. The rectum was distended by the ball of a spray-producer, and the bladder was washed and filled with boracic solution. The incision in the linea alba was limited to 1½ in. The bladder-wound was not closed, but the skin-wound was, with the exception of a small track for the drainage-tube passing into the bladder. The average age of the boys was just over three years, and

^{* &}quot; Rest and Pain." Second edit., p. 95.

the average weight of the stones 68 grs. Though Dr. Lendon does not actually speak ill of the bridge which carried him over, he says that had the proper instruments been available he would have performed litholapaxy in each case. In this he would have been quite right, and doubtless so skilful an operator on calculous boys as he has shown himself to be, has long ere this been provided with trustworthy lithotrites for future use in similar cases.

In the course of his paper Dr. Lendon refers to a case of suprapubic lithotomy which, so far as I know, has not hitherto been reported. He says that he once assisted an accomplished surgeon in England in performing the high operation. "When the bladder was opened the stone could not be found, the operation was abandoned, and the child died. Post mortem the diagnosis was found to be correct, but after the escape of urine the surgeon had made a fictitious cavity with his finger in the cellular tissue, into which the urine had escaped, and which, on inspection, had a most fallacious resemblance to the bladder."

Would that the history of suprapubic lithotomy in children during the last six years could be truthfully recorded! I believe that it would be discovered to be responsible for such a high percentage of deaths that the operation would again fall into discredit and desuetude. An unfortunate circumstance in connection with its revival was the ease, simplicity, and safety with which its over-zealous admirers affirmed that it could be performed. The result was that surgeons who had hitherto very properly shrunk from undertaking lateral lithotomy, imagined that what they considered "progress" in surgery had at last happily conceded to them an easy mastery over every calculous boy that blind chance might place in their way, regardless of the nature and size of boy and stone. The result has been, I know, unfortunate for the operation; disastrous, I believe, to the children; and, if so, discreditable to contemporary surgery.

For a very large stone, as I have already allowed ("Year Book" for 1888), the high operation is the proper method of treatment, whilst in most other cases lithotrity should be under-

taken.

Dr. Duret (Journ. des Sciences Méd. de Lille, Jan. 25, 1889) describes a case of the suprapubic operation in a boy of six years. The stone, which weighed 60 grammes (over 2 ounces), occupied the entire cavity of the bladder, and felt about as large as a mandarin orange when examined by the rectum.

It was impossible to distend the bladder or inflate the rectum. However, the finger of an assistant in the rectum gave great help in extracting the stone. The bladder-wound was not sutured; the stone had to be broken and extracted piecemeal. Probably in no other way could the stone have been satisfactorily dealt with.

At a meeting of the Bombay Branch of the British Medical Association which was held on May 13th, 1889, and reported in the Journal of July 13th, Surgeon-Major Banks stated that there was no difficulty in performing the operation of Bigelow in boyhood with suitable instruments, and that the smallness, tenderness, and undeveloped condition of the urethra had been much exaggerated. He believed that as the operation became better known, lithotomy would scarcely be practised except in occasional cases, and that he would have no hesitation in crushing any stone on which he could lock a lithotrite. He laid particular stress on using two aspirators for the evacuation of the débris, as it facilitated the thorough and expeditious emptying of the bladder. As a rule, the operation on a medium-sized stone should not occupy more than lifteen or twenty minutes.

Surgeon-Major Hatch said there were decided advantages in favour of litholapaxy. He cited an accident in which the lithotrite would neither open nor shut after it had been introduced into the bladder and opened; he had to remove it through the urethra by the use of gentle force, but there was no laceration of the urethra. Lithotomy was performed, and the case did well. He would like to know if any such like accidents had been met with by other surgeons, and what they would do in similar cases. Dr. Hatch thought that if the instrument could not be removed, a lateral lithotomy or suprapubic operation should be performed and the blades sawn off. In his experience, although some cases recovered in three days from litholapaxy, the average time was ten days; in lithotomy it was three weeks. If cystitis

existed, lithotomy should be performed.

The accident reported by Dr. Hatch is of particular interest to the Reviewer in connection with the caution which he expressed on page 193 of the "Year-Book" for 1888.

7. Incontinence of urine.

Dr. C. W. Earle, Dr. Simon Baruch (Archives of Pediatrics, 1888, p. 74, and 1889, p. 234). These are two thoroughly practical and valuable papers, written with considerable confidence, and recommending opposite plans of treatment. After recording several cases, Dr. Earle remarks:—" Everybody who is well versed in pediatrical literature, examines the prepuce and glans penis, but I am afraid that many excellent practitioners do not examine the urethra. Not every case can be cured by the sound,

but many which have received every other form of treatment and have not been relieved can be cured by this simple process. I may say that, considering the vast number of congenital defects which we know take place, I see no reason why there cannot be in this part of the body certain deficiencies which have always existed, and which, until cured, remain the exciting cause of this troublesome disease.

"In every case of incontinence which has resisted the ordinary routine treatment, use the sound. This single instrument has performed more cures in my practice than all the drugs

which I have prescribed."

Dr. Baruch, as physician to the New York Juvenile Asylum, which cares for nearly a thousand children, has had unusual facilities for studying this troublesome affection. The Asylum with which he is connected has "wet-bed wards," containing eighty beds. Every precaution is taken against the bladder becoming over filled, and amongst the prizes for cleanliness the children are taught to feel that the greatest is a remove from their wet associates. "Corporal punishment has had its day;" it renders the child more nervous, and so increases the urinary secretion. Whilst alluding to the value of circumcision in the treatment, he admits that among the boys in the Hebrew Orphan Asylum enuresis is remarkably rare; but the object of his paper is to show what wonders atropia can work, provided that it be administered in such a manner that the pupil is dilated during the sleeping hours. He begins to administer the drug in doses of 1 or 1 gr. in the late afternoon, and regulates the amount taken solely by the influence upon the pupil. It is surprising what large doses of belladonna and atropine children can bear, and the Reviewer is in full accord with that statement of the author that, in order to secure the therapeutic influence, the drug must be administered until its physiological effect is produced.

8. Prolapsus ani.

Dr. G. Rice (in the *Practitioner*, for December, 1888, p. 418) briefly records several cases of prolapse of the bowel in little children which yielded to injections of glycerine. The prolapse was caused by, or, at any rate, associated with, diarrhea. The effect of the treatment seemed almost magical, and a very few injections, which apparently gave neither pain nor discomfort, sufficed for the cure.

In the form of small enemata, glycerine appears to serve equally well in the treatment both of constipation and diarrhea in children ("Year-Book" for 1889, pp. 330, 119) and is in

probable that to its influence in checking the diarrhoea must be ascribed its usefulness in prolapse of the rectum. The method is simple, and may well be tried in conjunction with other methods, or as a preface to, if needs be, some method of more general adoption.

9. Acute intussusception.

Professor Annandale, at the meeting of the Edinburgh Medico-Chirurgical Society which took place on February 6, 1889, reported the case of a child of three years in which, on the third day of the symptoms, he opened the abdominal cavity. On turning aside the coils of distended intestine, he discovered an intussusception of the small intestine which he was fortunately able to unravel. The child made a complete recovery. Such reports are,

unfortunately, most exceptional.

On the other hand, Dr. Cheadle records (the Lancet, January 26, 1889) a fifth case of intussusception which he successfully treated by inflation:—A boy aged fourteen months had, six days previously, attracted attention by screaming. He was very pale, and apparently in great pain, and his legs were drawn up on the abdomen. He had passed blood by the bowel; and the passage of blood and slime had recurred daily; there had been no natural motion. A sausage-shaped tumour could be felt on the left side of the abdomen, extending from the hypochondrium to the iliac fossa. On introducing the finger into the rectum, the invaginated portion of gut could just be reached, and a dimple could be felt on its posterior aspect. On withdrawing the finger, it was found to be covered with slime.

By a Higginson's syringe the bowel was inflated with air until the abdomen became decidedly tense. After a minute or so, the air was allowed to escape; the tumour could still be felt. After repeating the inflation, only an ill-defined mass could be made out, and after a third inflation no tumour could be felt in any part of the abdomen. The child was ordered one minim of liquor opii sedativus every three hours. He became easier after the operation, the pulse improved, and two liquid motions were passed within two hours. He vomited once, immediately before being put under chloroform, but did not vomit afterwards.

The importance of an early diagnosis in these cases cannot be too strongly insisted upon, but the record of the above case shows that, even when an intussusception has existed for a week, the

prospect of a cure is not hopeless.

Together with this clinical record, the editors of the Lancet insert one of those bibliographical notices which add so greatly to the value of their "Hospital Reports."

10. Suppurative peritonitis treated by incision.

Mr. C. B. Keetley (Lancet, Dec. 29, 1888). The first case is that of a girl of eleven years old, who was desperately ill when Mr. Keetley opened the abdomen in the middle line, washing out extravasated and fortid pus with hot boracic lotion. The poor child unfortunately died, when it was discovered that the cause of the trouble was perforation of the vermiform process.

The second case was also a girl of eleven, who had a tender swelling between the iliac crests; temp. 102.° The suppurating peritoneal cavity was incised, and irrigated with a mercuric solution (1 in 5,000), and a glass drainage-tube was introduced.

She made a complete recovery.

Mr. Keetley remarks that the sooner that the surgeon is called in for consultation in these cases the better, though not necessarily for immediate operation. "The old-fashioned plan of never calling in the surgeon until the case looks as if it would be hopeless without recourse to surgery must, and actually does, to the certain knowledge of many of us, tend to cause persevering and zealous officers on the medical side to repeatedly try their remedies until the simple indication for surgical treatment remains that the patient must die unless it is used. It is then resorted to; the patient dies all the same; and the officers on the medical side may be further confirmed in their official reluctance to summon surgical aid. On the other hand, I think it is only fair that these cases should not be transferred from the physician to the surgeon, but that they should be attended in consultation to the last as well as from the first, and the credit of any good results evenly shared."

11. Subluxation of the head of the radius in children.

Dr. W. W. Van Arsdale (Annals of Surgery, June, 1889, p. 401) publishes the full paper which he had read at the New York Academy of Medicine. He remarks that as to the cause of the injury, there is an overwhelming testimony in evidence of traction on the hand or fore-arm; this point has always been considered of the first importance in diagnosis. Whether the traction is exercised by the nurse by lifting the child over an obstacle or by trying to sustain it when it is about to fall, or by swinging it around by both arms in play, is of less importance. In every case the weight of the child is sustained by the arm; thrusting the arm through the sleeve of a jacket is also cited as a cause. He says that in the references made to the injury (of which he gives a lengthy and carefully prepared list), with few exceptions, the authors describe the hand as being more or less pronated, the

arm hanging motionless with the elbow slightly bent. Some writers lay especial stress on the opposition to supination encountered in

rotary movements.

The click heard on attempting supination for the first time after the injury is denied by none, and to it alone is due the diagnosis of luxation or subluxation, so frequently made in these cases. The analogy with the snap heard in other joints during reduction of a dislocation appears unquestionable, and the freer motion after the snap has been heard renders the similarity still

greater.

As noted in the "Year-Book" for 1886, reduction is best effected by flexing the elbow to less than a right angle, so as to bring the radial head up to the capitellum, and at the same time gently but fully pronating the fore-arm. This movement "screws" the head of the radius back through the circular opening in the capsule. "The after-treatment usually consisted in the application of a pasteboard splint; sometimes a rectangular splint or a dextrine bandage was used; and the patients were directed to keep the hand in a sling. The splint was left on for three days, at the end of which the child was generally found cured. In the first cases where no splints were used, relapses were frequent. In about five cases, the splint had to be kept on for six days, swelling having ensued at the elbow or at the wrist, or, more generally, both." References would not have been again made to the subject, except that Dr. Van Arsdale thinks it well that we keep our eyes open for this lesion when a child's elbow has received some obscure hurt. His experience of the luxation is probably unique: "I now turn to the cases that have come under my personal observation, of which there are one hundred. These were all treated at the Eastern Dispensary of New York City. There are nearly one hundred and thirty cases on my books. Some of these were seen during my absence by my colleagues, and have been excluded. Three cases occurred in adults, and have also been ex-Then some cases were not well marked, so that the diagnosis rested between contusions and other injuries of the elbow-joint in children, and the one under consideration. have been likewise excluded."

The following are his conclusions:—That the injury frequently occurring in children, and called subluxation of the head of the radius, is a typical injury with well-marked symptoms, and is due to the same anatomical lesion in each case. That the frequency is over one per cent. of surgical injuries in children. That it occurs in children under nine years of age. That the most frequent exciting cause is sudden traction by the hand or fore-

arm; more rarely a fall. That the principal symptoms of the injury are: absence of appreciable deformity; loss of function of the arm; localised pain over the head of the radius on pressure; pronation of the hand; slight flexion of the elbow. Crepitation upon forced supination, with restoration of function, and that treatment with a splint is advisable in order to prevent recurrence.

DISEASES OF THE GENITO-URINARY SYSTEM

BY REGINALD HARRISON, F.R.C.S.,

Surgeon to St. Peter's Hospital, London.

1. The treatment of retention of urine prostatic enlargement. from

Mr. A. F. McGill (Brit. Med. Journal, October 19, 1889) gives the particulars of twenty-four cases where suprapubic prostatectomy for chronic retention of urine was performed by himself and colleagues at the Leeds Infirmary. Reference was made to this proceeding in the "Year-Book of Treatment for 1889"; but as a larger experience of the operation has since been gained, it is again considered desirable to notice it. The results already obtained are such as to place the proceeding on a permanent basis in properly selected cases, as patients were shown at the Leeds meeting where the success in every respect was both complete and apparently permanent.

In the selection of cases for operation, the mere fact that a person has to be dependent upon the use of the catheter would hardly seem to justify its adoption. When, however, there is not only obstruction to micturition as well as to catheterism, but there is also reason to believe, from the irritation excited, that the enlarged prostate projects into the bladder, as was found in all the twentyfour cases recorded by Mr. McGill, the conditions become such as to suggest the propriety of adopting the radical measures included in suprapubic prostatectomy. In the discussion that followed the reading of this paper, Dr. Trendelenburg, of Bonn, advocated the inverted position of the patient during the performance of this The advantages of his plan are that the intestines gravitate towards the diaphragm, and a better view of the interior of the bladder can be obtained. Further, the distension by the rectum and bladder, as in Petersen's method of performing suprapublic cystotomy, may be dispensed with, the viscus being opened

on the end of a catheter. In the after-management of these cases I am not in favour of the complete suturing of the bladder. The size of the wound in the parietes may be diminished by the insertion of one or two stitches, but nothing should be done to interfere with the free escape of the urine by a drainage-tube if necessary. To expect primary union in cases where the urine has been ammoniacal and offensive for some time past is almost out of the question, and the free escape of the urine should be encouraged. I have found the best dressing to consist in the liberal use of wool-wood pads. By means of these the patient may be kept absolutely dry and sweet until the wound has closed.

In making these remarks on suprapubic prostatectomy I do not wish to be understood as ignoring the claims of perineal prostatotomy as the best proceeding in some varieties of prostatic obstruction. There are cases, as Mr. Bruce Clarke pointed out in the discussion referred to, where the prostatic urethra is practically occluded by the pressure of the hypertrophic growth, and where obstruction to micturition as well as to catheterism is the only prominent symptom. I feel sure that in these cases, unless the surgeon is prepared to remove the whole of the prostatic mass, and to run the chance of rendering the patient permanently incontinent of urine, perineal prostatotomy will be found both immediately and permanently beneficial. This operation consists in opening the prostatic urethra by a median perineal incision, the division of the floor of the prostate, and the insertion and retention of a suitable drainage-tube. This method of treatment has been very fully described and illustrated by Dr. F. S. Watson, of Boston, U.S.A. ("Operative Treatment of the Hypertrophied Prostate," 1888.) A considerable experience of it enables me to confirm all the advantages claimed in cases of stenosis of the prostatic urethra for perineal prostatotomy.

2. A new form of prostatic dilator.

Mr. Reginald Harrison (Brit. Med. Journ., Oct. 19, 1889) describes a form of dilator which had been recently made for him by Messrs, Tiemann, of New York. In connection with this subject he remarks: "I should like to point to the necessity for the early treatment of prostatic retention. By this I mean the due recognition and correction of the first symptoms indicating that by reason of an enlargement of the prostate the bladder is commencing to fail in expelling its contents. It is now some years since I drew attention to the subject ('The Prevention of Stricture and Prostatic Obstruction' [Churchill] 1881), and advocated the use of bougies as prostatic dilators at a far earlier period in the history of chronic retention than had hitherto been

adopted. For this purpose I employed a particular form of prostatic dilator, by means of which dilatation could be easily and efficiently carried out. Abundant testimony has been afforded that the practice I then advocated has been the means of preventing many bladders becoming hopelessly atonic by reason of prostatic hypertrophy."

3. Prostatectomy: a sequel to the operation of suprapubic lithotomy.

Mr. A. W. Mayo Robson (Brit. Med. Journ., March 9, 1889) writes: "I do not believe that the operation adds materially to the dangers of suprapubic lithotomy, either in the way of im-mediate shock or retarded convalescence. I would therefore suggest that wherever it is suspected, in an old patient suffering from calculus, that the prostate is enlarged, the suprapulic operation should be performed, so that at one operation the stone may be removed and the hypertrophied prostate diminished, thus reducing the likelihood of nocturnal incontinence, of cystitis, and of recurrence of stone."

That a large prostate is a frequent cause of the recurrence of stone, by preventing the complete and spontaneous emptying of the bladder, there can, I think, be no doubt. The practice recommended by Mr. Robson, and of which several successful illustrations have been already recorded, is one that is now likely to be more generally adopted. In complicated cases of this nature the ocular inspection of the parts affords the greatest assistance to the operator. Dr. Trendelenburg's position, as mentioned in the first note, has much to recommend it.

 On the suprapuble operation.
 Sir Henry Thompson (Brit. Med. Journ., July 6, 1889). In a review of this paper Mr. Wagstaffe (Lond. Med. Rec., Aug. 20, 1889) writes: "These cases include two performed by the old method as generally adopted before the modification suggested by Garson, and carried out so successfully by Petersen, of Kiel: This latter operation Sir Henry Thompson introduced here, and first performed in this country. There are twenty-nine cases of the new operation; eleven of these were for tumour of the bladder, and eighteen for calculus, including one remarkable case associated with a large prostate (Clin. Soc. Trans., vol. xxi.). The chief points attended to in this operation were to commence with a fully but prudently distended rectum, followed by a fair dis-tension of the bladder, a sparing use of the knife, so that a ligature was very rarely necessary; the opening of the bladder by a small incision sufficient to fit the finger, but enabling further enlargement to be made by dilatation only, since after this

the opening contracts, and stitching is not necessary, and, moreover, appears to be generally not advisable." There can be no doubt that in the case of tumours of the bladder the suprapublic opening gives a precision to the proceeding which is not provided by any other method of operating.

5. The treatment of confirmed catheter life by a permanent perineal opening.

Mr. W. Whitehead (Brit. Med. Journ., April 13, 1889) advocates the employment of median perineal urethrotomy, and the permanent maintenance of the fistula thus established, in certain cases where it is desirable to avoid the pain and inconvenience attending the constant passage of catheters. The paper is illustrated by the narration of cases of enlarged prostate, where the symptoms connected with the advanced form of the disorder were completely relieved in this manner. The paper concludes by emphasising the chief features of this treatment: "First, that the operation is undertaken with the design to establish and maintain a fistula in the closest possible proximity to the bladder, but in front of the prostate. Secondly, that the fistula can be utilised at pleasure for the dual purpose of relieving the contents of the bladder, and of minimising the inconveniences attending regular, systematic, and thorough irrigation."

The practice advised has much to recommend it in cases of difficult catheterism connected with prostatic obstruction. It practically dispenses with the use of the catheter by the long route, and substitutes a short and easy access to the bladder, which the practitioner and patient can avail themselves of to their mutual advantage. In cases where there is persistent difficulty in catheterism, due to a large and obstructing prostate, a perineal puncture and the introduction of a drainage-tube are a source of the greatest relief to the patient, and have often proved the means of prolonging life. It is almost as easy for one patient to go about with a tube in his bladder, as it is for another to wear a tracheotomy tube. In both instances suffering is frequently

avoided, and life considerably prolonged

6. The symptomatic indication and therapy of residual urine.

Commenting upon Casper's paper (Berliner Klinik, No. 7, and Journal of Gen.-Urinary Diseases, Oct., 1889, New York) it is remarked: "It is doubtless true that in certain cases of chronic retention catheterisation is absolutely to be warned against, but the author endeavours to free it from the suspicion of causing in many cases severe cystitis, and even the death of the patient. The cystitis is caused in these cases by the introduction of

infectious material, while the sudden death is due to the operation having been put off too long. The catheter should be thoroughly cleansed and disinfected, and introduced with the utmost care. Soft instruments are preferred. For anointing the instrument equal parts of lanolin and vaseline well rubbed up

together are recommended."

In no class of cases is the adoption of antiseptic precautions more necessary than in the early mechanical treatment of residual urine in connection with an enlarged prostate. No more favourable condition can exist for the development of urinary fever. or, as Sir Andrew Clark described it, catheter fever, than the daily reduction of the atonic bladder into a state of sudden and complete flaccidity. From some experience in this class of cases, not only would I emphasise the remarks just quoted in regard to local treatment, but I would go further and urge that much may be done to prevent the development of urine fever under these circumstances by sterilising the urine by the internal administration of drugs. Of the sterilising agents for use in this manner I have found boracic acid of the greatest service. The formula I employ is as follows :- Boracic acid, 31. sodæ bibor., 3iss.; syrup tolu, 3vj.; aquæ ad 3vj.; M. Cap., 5ss.; 3 tiis horis ex aquâ. It will be found in practice that a considerable proportion of the boracic acid is eliminated by the kidneys, and the urine is thus sterilised. My attention was first directed to the use of this drug as a urine antiseptic by a paper by Dr. Palmer (American Medical Practitioner, Aug., 1887). As a preventive of fever in connection with all operations on the urinary organs, an extended experience of it has endorsed its value. It has proved of far greater value than quining, which acts in a somewhat similar manner.

7. The treatment of stone in the bladder in male

infants and boys.

Mr. Vincent Jackson (Lancet, Aug. 24, 1889) publishes a valuable paper on this subject. His figures indicate that during a period of twenty-four years 132 perineal operations for stone in the bladder of boys, varying in age from one to fifteen years, have been performed in the Wolverhampton General Hospital. Of the whole number, the death-rate is one in a little over twenty cases, the mortality being between 3 and 4 per cent. Mr. Jackson remarks: "I wish these observations to be considered a contribution to the very important subject of perineal lithotomy in male children and boys especially, as at present the employment of other operative methods of dealing with this particular surgical disease is being strongly recommended to be adopted, as it were,

to the effacement of that time-honoured operation for the removal of stone from the male bladder, viz., the great English surgeon's improvement of Frère Jacques' method." Having regard to the safety of the operation, its thoroughness, and the period of convalescence, time, I think, has already shown that there is no other cutting proceeding which can compare with a well-performed lateral lithotomy. Some operators may find suprapublic cystotomy easier of performance, but I question very much whether statistics on a corresponding scale would give such results as I have quoted from Mr. Jackson's practice,

8. On sounding for stone where the prostate is enlarged.

Mr. Buckston Browne (Brit. Med. Journ., March 16, 1889) refers to some difficulties in connection with examining for stone when the prostate is enlarged, and describes a form of sound which he has found well adapted for this purpose. The sound recommended is of "solid burnished steel, with a round smooth handle, a shaft ten inches long, and equal to No. 7 of the English

Such an instrument seems well adapted for the purpose; the great fault with all metal sounds is that they are made of too large a calibre. A sound should move easily, and not be made to fit the urethra too tightly. If such an instrument is grasped by the urethra, it is almost impossible to make an accurate exploration of the bladder without causing an unnecessary amount

of pain to the patient.

9. Perincal urinary fistula.

Mr. W. Thomson (Brit. Med. Journ., Feb. 9, 1889) writes :-"In a case of long-standing fistula, with considerable riddling of the perineal structures, I would recommend thorough slitting, and scraping or clipping out of all the fistulous tracts; the retention of a catheter through the perineum for several days so as to prevent the passage of urine along the old paths; and then the opening of the bladder above the pubes by a small incision so as to divert the urine in that direction. The suprapubic opening should be maintained until there is firm closure of all perineal fistulæ."

This practice may probably prove useful in some instances of urinary fistula. It must, however, be remembered that if there is any permanent contraction of the urethra, as in the majority of cases of perineal fistula, there will be considerable difficulty in securing closure of the suprapubic opening. Subject to this

reservation, the practice is one that may prove useful.

10. Extroversion of the bladder treated by preliminary narrowing of the gap existing in the public symphisis by means of division of the sacro-iliac synchondroses.

Mr. G. H. Makins (Med.-Chir. Trans., London, vol. 71) refers to the history of this procedure, and illustrates its practice by the narration of a case which, though not a complete success, shows "the advantages which this preliminary operation offers in contracting the area which has to be covered." The operation for the loosening of the iliac synchondroses is one that can be only resorted to in early life. Professor Trendelenburg (Centralbl. f. Chir., No. 49, Dec., 1885) placed the limit between two and four years of age. In a recent letter to Mr. Makins he states that he now regards five as the most suitable age.

The paper is of considerable interest in connection with the treatment of one of the most distressing congenital deformities that come under the notice of the surgeon, its object being to show how much may be done without having to resort to flaps,

which are liable to slough.

11. Vesical irritability.

Dr. A. W. Stein (Journal of Cutaneous and Gen.-Urinary Diseases, New York, October, 1888) remarks: "I would express my conviction that in a large number of cases of vesical irritability in women, in which the exciting cause of the complaint is obscure, dilatation of the vesical neck affords prompt and signal relief. I do not consider it ever necessary that the dilatation be sufficient to endanger the integrity of the sphincter. I rarely exceed five or five and a half centimetres, a degree of dilatation I have found entirely innocuous and satisfactory. But the dilatability of the female urethra varies much. In some persons the meatus is rigid and very unyielding, while in others you can carry the expansion to the full capacity of my instrument. which is six and a half centimetres, with scarcely any pain and very little delay." Continuing the subject of vesical irritability. Dr. Stein remarks: "How often have we accused the bladder of a disease of which it was innocent, simply because it expressed a source of irritation located elsewhere! How often have we mistaken the frequent micturition, pain referred to the neck of the bladder, and pus in the urine-the three cardinal symptoms, the tripod on which cystitis rests-as indicative of this disease, and perhaps harassed the already overtaxed viscus with treatment, and at the autopsy (the logical outcome of the case) the bladder was found entirely healthy, but that one of the kidneys was converted into a sac of pus!" The truth of this remark it is impossible not

to recognise. Irritability of the bladder is frequently a reflex of a condition of the kidney or kidneys which can only be satisfactorily rectified either by a nephrotomy and drainage-tube, or in the male by a perineal urethrotomy should both kidneys be involved in a chronic suppurative process, which by its nature does not permit of any other method of treatment.

12. Tuberculous prostatitis:

Mr. Berkeley Hill (Hunterian Lectures, Royal College of Surgeons, 1889), referring to the treatment of this troublesome affection, remarks: "In the early stages the catarrh must be cured, and the general treatment for tubercle applied. In the latter stages the ragged cavities must be carefully washed out. A good antiseptic solution is two grains to the ounce of sulphate of quinine, two ounces being injected and left in the bladder after the pus and urine are well cleared out by repeated small injections of boric acid solution. Still more antiseptic is an emulsion of iodoform. In cases of chronic cystitis, if the bladder is well washed and a couple of drachms of this emulsion injected, the most fætid ammoniacal urine is replaced by acid urine, fortor disappears, and the pus rapidly diminishes. In cases of cystitis caused by neglect of prostatic retention, the urine in ten days becomes quite free from deposit; and even when calculus, or tumour, or malignant ulceration co-exists, the improvement is enormous. When the pain of washing the bladder is severe, cocaine previously injected often renders the operation bearable. The formula for the emulsion isiodoform, two parts ; mucilage, four parts ; glycerine, two parts ; water, twenty parts." The certainty with which tuberculosis of the bladder, if unchecked, infects the ureters and kidneys, points to the necessity for adopting such local measures as Mr. Hill refers to. As a bactericide for irrigating the tuberculous bladder, I should like also to give prominence to the use of an extremely weak solution of bichloride of mercury (1 to 5,000). As in other tubercular sores, the power of mercury in promoting healing and arresting the spread of ulceration when the bladder is in this way infected is often very remarkable. In connection with the subject of urinary tuberculosis I would refer to a paper

13. On the occurrence of tubercular disease of the testicle as a local affection, particularly with reference to the desirability of early castration in certain cases.

Mr. W. H. Bennett (Med.-Chir. Trans., London, vol. 71).—In the course of this paper it is pointed out that tubercular disease of the testes is not an uncommon source of infection which may spread to other parts of the urinary apparatus, and that "the

rational treatment for these cases is castration upon the appearance of symptoms of suppuration about the original disease, i.e., at the onset of the dangerous period." That the condition of the testis often furnishes a clue to the nature of symptoms connected with the urinary organs is a well-established and recognised point in diagnosis. As a natural deduction from this, there can be no doubt that the removal of the primary source of infection when the organ in which it occurs is thereby rendered useless is a step in preventive surgery which must recommend itself to our adoption. The speed with which infection sometimes spreads from the testis to the bladder, ureters, and kidneys, is often very remarkable, and quite justifies the course recommended by Mr. Bennett, provided it is proceeded with before signs of general urinary tuberculosis show themselves. Partial excision of the testis has been practised, but complete removal is to be preferred.

14. Incontinence of urine.

Mr. Reginald Harrison (Brit. Med. Journ., July 16, 1889) records a case where incontinence of urine appeared to be coincident with an arrest in the development of the prostate. In relation to the treatment of this affection, the question is raised: "What proportion of cases of incontinence in male children is due to an imperfect development of the retentive apparatus which must exist in the parts constituting the neck of the bladder? My belief is that by far the larger number of cases are explainable by reflex causes such as we are familiar with. I am not, however, at all sure that some may not be due to an arrested development in the prostate such as I have illustrated."

15. On the medicinal treatment of hamaturia.

Dr. Felix Guyon (Annales des Maladies des Org. Gén-Urinaires, No. 1, 1889) appears to have but little belief in the hæmostatic agents usually employed in cases of hæmorrhage from the urinary tract. He seems to think that many of these astringents do positive harm by disturbing digestion and interfering with appetite. Consequently he prefers those agencies which tend to improve the condition of the blood, such as tannin and cinchona, which are favourably mentioned. Perchloride of iron he regards as a useful remedy, but simply on account of its chalybeate properties.

When we consider the various circumstances under which hæmaturia is seen in connection with diseases of the urinary apparatus, we cannot fail to recognise how futile drugs may be if an accurate diagnosis is not first arrived at. The hæmorrhage which proceeds from the friction of a calculus in the pelvis of the kidney, or, in another instance, from the vascular fringe of a villous growth, are illustrations of conditions where all drugs must act at a very considerable disadvantage. On the other hand, in the early stage of urinary tuberculosis, where hematuria frequently occurs, the use of such hemostatics as iron, ergot, and preparations of tannin, often proves of great service. Care, however, should be taken, as Guyon points out, that in endeavouring to arrest hematuria we do not do so at the expense of the digestive and assimilative apparatus.

16. Retention of urine-Hæmaturia.

Guyon (Annales des Maladies des Organ. Gén.-Urinaires, June, 1889) draws attention, from some experiments he refers to, to the state of vesical engorgement which attends retention of urine. Reference is made to these observations as explaining the hæmaturia which is frequently met with in elderly persons suffering from prostatic enlargement, with more or less residual urine. Where these conditions co-exist, a considerable proportion of cases of hæmaturia are completely remedied by the regular use of the catheter. Instances frequently come under observation where this simple expedient has been overlooked, and a variety of hæmostatics administered without benefit.

17. The treatment of urethral stricture by rapid dilatation with Lister's graduated sounds.

Mr. Mayo Robson (Provincial Medical Journal, No. 7, 1889) illustrates this practice by a considerable number of cases where the strictured urethra was at once dilated up to its normal size. To facilitate this object I brought under notice (British Medical Journal, Dec. 10, 1881) a stricture stretcher, or modification of Holt's dilator, for the purpose of completing the dilatation of a stricture, however tight, at a single sitting, with as little damage as possible to the urethral walls. There can be no doubt that the more thoroughly a stricture is dilated, the less liable the patient is to attacks of rigors and fever after the process. In cases of acute retention of urine from organic stricture of the urethra, it is the duty of the surgeon not only to relieve the bladder with the catheter, but at the same time to secure a proper and sufficient access to the bladder should retention again occur. Mr. Robson illustrates how this can be done by the most convenient form of metallic bougies.

18. On the treatment of some urethral strictures by section and drainage.

Mr. Reginald Harrison (Medical Press and Circular, No. 6, 1889), in a further communication on this subject, advocates the employment of combined external and internal urethrotomy in the treatment of some of the worst forms of urethral stricture, on the grounds that rigors and fever, and the complications arising out of these, are avoided, and that the condition of the stricture is permanently improved. In the course of this paper reference is made to the modes of procedure adopted in this class of operation, as well as to the instruments and drainage-tubes employed. "Amongst these let me give a place to an ingenious little instrument well known in America as Bank's filiform bougie. made of the best and most highly-polished whalebone (fifteen inches in length), and can generally, with a little patience, be insinuated through the finest stricture without the patient knowing much about it, if it is delicately handled, and not made by a heavy hand to double on itself. It is on the principle of the double inclined plane, and most strictures yield to its pressure when we are conscious, from the way it moves, that the fine bulbous end has entered the bladder."

19. The radical cure of deep urethral stricture.
Dr. E. L. Keyes (New York Med. Rec., May 25, 1889) discusses the treatment of stricture occurring in the deep or subpublic urethra, in contradistinction to that of the pendulous urethra-In reference to the latter he states : "We may all accept it as a demonstrated fact that internal urethrotomy, preferably performed with the dilating urethrotome, will, if the incision be deep enough to extend entirely beyond the outer limit of the stricture tissue radically cure organic stricture of the anterior urethra." In the deep urethra Dr. Keyes recognises three varieties of stricture, which he speaks of as, (1), soft; (2), cicatricial fibrous stricture; and (3), the nodular. To these kinds, in their respective order, dilatation, internal urethrotomy, and excision of the stricture, with suture of the divided ends, are applicable. Space will not permit the discussion of various points which Dr. Keyes' paper. evidently embracing a large experience on the whole subject of stricture, raises. It appears to me that surgeons are by no means agreed that organic stricture in any portion of the urethra is ever permanently cured in the ordinary acceptation of the term. That most of us have seen instances where after treatment an organic stricture has ceased to trouble, will not be denied ; but this is very different from concluding that a certain line of practice has already furnished us with results which would justify our speaking of the radical cure of stricture other than as a somewhat exceptional and unexpected result. Nor do I think we have sufficient evidence to justify a classification of strictures, relative to the question of treatment, other than what is the outcome of tentative measures adopted for their relief. Having regard, therefore, to these points, it seems to me that

treatment by dilatation - the simpler the form, the better -should still hold first place; and that until this has been proved insufficient, other measures should not be resorted to. In this expression of opinion I by no means wish to undervalue the employment of internal and external urethrotomy, either separate or combined, or other methods of treatment to which Dr. Keyes refers in his paper. At present it seems to me we are not in a position to classify strictures very finely, in reference either to their pathological characteristics or their treatment; and that, consequently, the process of dilatation will probably serve to indicate more certainly than anything else what further may be required. If a man can keep himself well and fit for all the requirements of comfortable life by submitting himself to an occasional inconvenience which is about on a par with brushing his teeth, I do not think he has much to complain of. Dr. Keyes' paper is worthy of careful attention by all interested in the subject of which it treats.

20. The diagnosis of obscure vesical disease by the electric light.

Mr. E. Hurry Penwick (Brit. Med. Journal, May 11, 1889) illustrates the employment of the electric light in a considerable number of obscure diseases of the bladder, including various forms of new growth, tuberculosis, and other sources of hæmaturia. That the instrument has proved of great value relative to treatment, there can be no doubt, as the precise morbid condition is thus ascertained. Such means cannot fail to give therapeutics an exactitude in their application which they have only recently acquired.

21. The radical treatment of varicocele.

Mr. W. H. Bennett (Lancet, Feb. 9, 1889) describes a method of treatment by ligature and excision combined which seems to possess some advantages. The operation consists in introducing a ligature above and below, beneath the varicose veins, including the sheath of fascia which immediately surrounds them, and then excising the intermediate portion. "The cut ends of the stumps left by the division of the varicocele are brought together and retained in permanent apposition by knotting the ends of the upper ligature to those of the lower, thus at once raising the testis to about its natural level. The ligature-ends are now cut off quite short, and the operation is completed." The paper contains many points of interest in connection with the subject of varicocele, and the principles which should guide us in the selection and performance of an operation for its permanent relief.

VENEREAL DISEASES

By ALFRED COOPER, F.R.C.S.,

Late Surgeon to the Lock Hospital.

1. The curability of syphilis.
In his Lettsomian Lectures on Syphilis and the Nervous System (Brit. Med. Journ., Feb. 16th, 1889), Dr. W. R. Gowers expressed the opinion that syphilis was an incurable disease —in other words, that there was no real evidence that the disease ever is or ever has been cured. He admitted that we can, under favourable circumstances, remove most true specific lesions, and bring to an end most true specific processes, but pointed out that the arrest or removal of the manifestations of a disease is a very different thing from its cure. "When we speak of the cure of a disease, we mean that its essential element, that which lies behind all its symptoms and consequences, that which is the persistent cause beneath the transient effects, is made to cease, is ended once and for all as a morbitic agent, so that it never again disturbs the system." In this sense, he affirmed, we cannot bring the disease to an end. In proof of his assertion, Dr. Gowers alluded to the cases in which the immunity from symptoms that follows a course of treatment is not permanent, inasmuch as other manifestations show themselves at a later period. He also dwelt upon the fact that in very few of the cases regarded as cured has the patient been kept under observation long enough to justify the positive conclusion that the disease was at an end, and that in not a few instances, in which no treatment whatever was adopted, later symptoms are altogether absent. He urged that the extreme variations in the character and course of the disease have not been sufficiently allowed for by those who are under the impression that the cure of syphilis is within our power. Dr. Gowers, however, admits that we may very nearly achieve a cure of syphilis, and even sometimes attain it. Treatment at any rate is capable of repressing and even suppressing the activity of the materies morbi. As might have been expected, Dr. Gowers' view has been adversely criticised, and several letters on this

subject are to be found in the March numbers of the British Medical Journal. Others in the Lancet are referred to below,

2. Is syphilis curable?
Mr. F. W. Lowndes, of Liverpool, answers this question in the affirmative (Lancet, April 20, 1889). He cites, as a proof of its curability, the occasional second appearance of the disease after exposure to fresh infection, and thinks that if it were incurable there would be many more deaths from it. A fatal issue from syphilis pure and simple is very rare, and the cases in which it plays a more remote part in causing death are comparatively few. Moreover, if the disease were incurable, we should see more cases among wives and children. Most practitioners have met with many cases of syphilis in males who have afterwards married, and whose wives and children have shown no signs of the disease. The majority of wives who suffer from syphilis have contracted the disease from husbands who have become infected after marriage. Syphilis may remain latent for some years, and is sometimes intractable; but the majority of cases occurring in healthy subjects, and treated in the earliest stage with mercury and the iodide, usually terminate in a mild attack of secondary symptoms. Unfortunately, primary syphilis, as it causes little inconvenience, is often neglected, the patients attend a few times in the out-patient departments of hospitals, or apply to chemists or quacks. Tertiary affections are much more carefully treated. Mr. Lowndes suggests that all students should be required to attend Lock hospitals or Lock ward practice.

3. The curability of syphilis.
Referring to Dr. Gowers' lectures on syphilitic affections of the nervous system, Mr. H. Lee (Lancet, March 23, 1889) writes that the statement, "there is no evidence that syphilis is or ever has been cured," is one which, if received without explanation, would lead to very disastrous results. The fact is, that if patients, after proper treatment, are free from symptoms, have as healthy families, and live as long as others, then syphilis may be considered to be as amenable to treatment as any other disease. Proper treatment, Mr. Lee considers to be a course of mercury extending over eight to twelve weeks, during which the gums should be kept slightly tender, and the patient not exposed to cold air or cold water. Afterwards small doses of the iodide may be given to assist the action of the mercury, which is apt to cause diarrhea if too long continued. Mr. Lee prefers the calomel bath to other methods of administering the drug. He cannot recall a single instance, in which this treatment was carried out from the commencement, where the bones or the nervous system were subsequently affected. He has often seen patients from ten to twenty years after treatment, and they with their wives and children remained healthy. He does not approve of the plan of subjecting the patient to a yearly course of the iodide for three weeks during the five years ensuing after infection.

4. The so-called abortive treatment of syphilis.

Dr. C. B. Drysdale (The Therapeutic Gazette, Dec. 15, 1888) discusses the effects of mercury prescribed as soon as the nature of the disease has been discovered. He alludes to the views held by Solly and Hutchinson to the effect that mercury is destructive of syphilitic germs, and that given in the earliest stages it often prevents the appearance of further symptoms. Sir Spencer Wella, and Diday of Lyons, dissent from this view. Dr. Drysdale treated all his patients with the green iodide of mercury, followed by Hydrarg, cum Creta, but always witnessed slight secondary symptoms. Recently, Professor Neumann has asserted that inunction does not prevent the development of secondary symptoms, but delays their advent and hastens the disappearance of chancre Fournier thinks that early administration checks the development of tertiary symptoms in most cases; Lancereaux and Jullien are of an opposite opinion. Keyes, of New York, gives small doses of the green iodide several times daily for months or years. Dr. Drysdale thinks that it is difficult to determine whether the advent of tertiary symptoms can really be checked by mercury. It is certain that the iodide of potassium (either with or without mercury) has a decided effect on gummata. On the whole, Dr. Drysdale recommends early treatment with mercurials.

5. The abortive treatment of syphilis.

Prof. Fournier (Gazette des Höpitaux, 1888, No. 116) thinks that the results of the abortive treatment of syphilis (i.e., excision of the primary sore) are not of an encouraging character. Extirpation of the glands is impracticable, especially when the penis is the seat of the primary lesion; the operation is dangerous, for many of the glands are small and deeply seated. Cauterisation of the sore with chemical agents, with the actual or the galvanic cautery, only ends in failure. Allegations as to positive results obtained by this method and by excision are to be mistrusted; in many of the published cases, the ulcer cannot have been of a specific character, for the period of incubation was too short. In other instances the test of confrontation was not applied, and the large majority of the patients were not sufficiently long under observation. In order to arrive at a positive conclusion, the following points must be carefully attended to; (1), confrontation with the source of infection; (2),

incubation of from three to four weeks; (3), observation of the patient for a period of six months.

6. The treatment of syphilis at the present day.
Dr. Lassar (Deutsche Med. Woch., 1889, No. 6) recommends
prompt excision, and immediate constitutional treatment as
affording the best chance of cutting short the disease. Excision
may remove the germs, or at least mitigate the severity of the
attack; but general treatment is also required, as it is always

may remove the germs, or at least mitigate the severity of the attack; but general treatment is also required, as it is always impossible to determine how far the virus has penetrated into the lymph-channels. He regards the injection of insoluble preparations as dangerous, and recommends a 2-per-cent. solution of the perchloride for males, and 1 per cent. for females. Three per cent. of salt is added, and the solution is boiled and filtered; one gramme is used for each injection. In severe affections the iodide of potassium should be given at the same time. Massage of the glands and muscles with grey soap is also recommended. Perspiration should be encouraged; the patient should be well fed, take plenty of exercise in the open air, have sufficient sleep,

and be made as comfortable as possible.

7. The diagnostic value of the iodides in syphilis. Dr. H. C. Wood, in an article on syphilitic affections of the nervous system, asserted that in all doubtful cases iodide of potassium was a test of the presence of syphilis, and that if one drachm per day did not cause iodism, for all practical purposes the patient might be regarded as syphilitic. Jullien also states that syphilis produces tolerance of the remedy. Dr. White, of Philadelphia (The Therapeutic Gazette, December, 1888), thinks that although the rapid disappearance of severe head-symptoms under large doses is suggestive of syphilis, yet if this result be wanting, the non-specific character of the disease cannot be inferred. If there be no iodism, we must not therefore believe that the complaint was probably specific. According to Jullien's theory, the tolerance is due to the presence of a virus, the destruction of which exhausts the activity of the iodide. Against this view is the fact that in most cases iodine is used in the third stage, when the disease is not contagious and not transmissible, and has lost all the properties of a living active virus in the blood and tissues. It is therefore improbable that any poison exists which can neutralise the action of iodine and its compounds so as to prevent their effects on healthy structures. It is far more probable that the occurrence of iodism depends upon idiosyncrasy. Only cases in which large doses were given before and after infection could be utilised for testing Wood and Jullien's theories. Dr. White cites three cases, and his conclusions are: (1) personal idiosynexasy is a great factor in the production of iodism; it completely throws into the shade any possible influence of syphilis; (2), there are no sufficient theoretical grounds for believing that syphilis in any stage hinders the production of iodism by neutralising the drug, and it is very improbable that any such result should be produced in the last stages of the disease; (3), it is therefore very unsafe to draw any diagnostic conclusions from the presence or absence of iodism after large doses of iodine.

8. The iodide of potassium in syphilis.

Dr. H. C. Wood (The Therapeutic Gazette, December, 1888) assumes the existence of an antagonism between the syphilitic virus and iodide of potassium, inasmuch as the former causes changes in the organism which alter the relations of the latter to the preparations of iodine. He has observed nearly 2,000 cases of syphilitic nervous diseases exhibiting a wonderful tolerance of the iodide. With few exceptions, all these patients bore twenty-grain doses frequently repeated, whereas the majority of non-syphilitic cases could not take more than ten grains thrice daily without iodism. But there are some non-syphilitic subjects, who, with small and gradually increased doses, can tolerate large quantities as well as syphilitic subjects. As a general rule, when large doses are well borne, syphilis may be suspected, especially when symptoms of an organic disease are present which cannot be otherwise explained. Dr. White's opinion is due to the fact that he treated primary cases; Wood's patients were suffering from late symptoms. The prognosis is generally favourable when the symptoms subside and the iodide is well tolerated; but there are exceptions to this statement. There may be tolerance without improvement, as in cerebral atheroma, in sclerosis of nerve-centres and in dementia paralytica, and when permanent lesions exist due to the presence of a gumma which has been removed. Whether mercury or iodine is to be given depends upon the symptoms rather than the stage. When there is low vitality and a tendency to necrosis, mercury should not be given in full doses; but good results may sometimes be obtained from small doses of the perchloride combined with large doses of tincture of iron. drawback to the iodide is its slowness of operation; in cerebral syphilis without marked cachexia, mercury should be given to slight salivation, which should be kept up for days or weeks. Then iodide of potassium should be given to withdraw the mercury from the system; at first, ten grains thrice daily; after two or three days, twenty grains, and so on up to two or three drachms, if one drachm daily cause no trouble. Half an ounce is the maximum daily dose, and may often be given without iodism. It is best given in Syr. Sarsæ Comp., and if iodism occur, the drug should be stopped for a few days, and then given in smaller doses. A large number of communications on the question raised by Dr. Wood appeared in subsequent numbers of The Therapeutic Gazette (February, March, and June, 1889), the balance of opinion being against the view that tolerance of the iodide is a sign of syphilis. Dr. Knapp, of Boston, U.S., dissents from Dr. Wood's view, and asserts that large doses are less likely to produce iodism than small ones.

9. The methods of administering iodide of potassium in cases of syphilis.

Prof. Fournier (Gazette des Hôpitaux, 1889, No. 28) uses the iodide in three ways: (1), subcutaneously; (2), by enema; and (3), by the mouth. He uses the first plan only in very rare cases, as in cerebral syphilis with symptoms of coma. Enemata are employed only when the drug is not tolerated by the stomach; a few drops of laudanum should be added. In the majority of cases the iodide is given internally in solution or with syrup, as follows:—B. Potass. Iodid., 30 grammes, Aquæ Destil., 500; or Potass. Iodid. 25, Syrup. Cort. Aurantii, 500; or with 350 of simple syrup. The average daily dose for an adult male is 3 to 4 grammes; for women 2 to 3 grammes. Smaller doses are insufficient; it is best to begin with 2 grammes for men and 1½ for women. Doses of 5 to 10 grammes are very seldom advisable; they may be required in cerebral syphilis, phagedæna, and in very inveterate cases of syphilis.

10. The perchloride and the proto-iodide of mercury as remedies for syphilis.

Prof. Pournier inquires (Gazette des Hôpitaux, 1888, No. 128) whether preference is to be given to the perchloride or to the iodide of mercury as a remedy for syphilis. He points out the advantages and disadvantages of each preparation, as evidenced by the effect on the salivary secretion, the bowels, and the symptoms and course of the disease. He affirms that the iodide is more prone to affect the gums and to excite stomatitis, especially in women; but that it is less liable than the perchloride to produce disorder in the alimentary canal and to cause pain in the stomach and difficulties of digestion, which may last for some time. The iodide may cause occasional diarrhoa, but this does not necessitate a discontinuance of the treatment. The dose may be increased with less difficulty than in the case of the perchloride. Fournier therefore prefers the iodide; it is less likely to cause stomatitis than the perchloride to induce disconders.

of the digestive organs. Both remedies should be given in the form of pills; of the perchloride an adult male should take 3 centigrammes and a female 2 centigrammes daily; the daily doses of the iodide are from 10 to 12 and 7 to 8 centigrammes for males and females respectively.

11. The salicylate of mercury in the treatment of syphilis.

Dr. Hahn, of Bonn (Archiv f. Derm. u. Suph., 1889, Heft 3, s. 317), after referring to the introduction of the salicylate by Dr. Araujo, a Brazilian physician, states that it has been tested by Szadek, Plumert, Epstein, Neumann, and others. All agree that it causes little pain and local reaction if used in the form of subcutaneous injection, in doses of one-tenth to one-fifth of a grain, suspended in oil of almonds. The salicylate is an amorphous white powder, neutral in reaction, very slightly soluble in alcohol or water, but more so in solution of salt. It contains 59 per cent. of mercury. Dr. Hahn has used it in Dr. Doutrelepont's clinic, and recommends that it should be suspended in liquid paraffin (1.5 to 15) and well mixed before using. The syringe should contain 2 cubic centimetres, and the cannula should be 5 centimetres long. The gluteal region is chosen for the injection; one-tenth of a gramme is used every eight days, and after a while ·06 every four days, the spot being carefully disinfected with alcohol and sublimate before inserting the needle. The injection causes slight burning, but scarcely any pain; on the following day there is a feeling of pressure and some hardness, which, however, soon disappear. The wound heals in a few days, and neither infiltration nor abscess remains. Stomatitis is usually very slight; the mouth should be kept very clean with a gargle and camphorated From six to eight intooth-powder. Diarrhea never occurs. jections are generally required; after the second slight symptoms disappear, glandular induration exhibits slower changes. There has not been time for noticing whether relapses occur, but in one patient the symptoms reappeared ten days after leaving the wards. Dr. Hahn treated thirty-eight cases, and his conclusions are that the salicylate gives good results in all forms of syphilis, carly symptoms subsiding after one or two injections. As advantages, he mentions the fact that there were no local symptoms and no signs of poisoning. To avoid the latter, it is well to use 05 gramme every three days. The total number of reported cases treated by this method is 219, with 1,518 injections, and there seems to be a general consensus of opinion as to its value and the freedom of the preparation from irritant properties.

12. The effect of salicylate of mercury on consti-

Prof. Neumann has tried the salicylate in twenty cases of recent syphilis and in one of inveterate disease, and regards it as equal to the perchloride and bicyanuret and to the pertonate of mercury (Wiener Med. Woch., 1888, No. 47). In ten cases it was given in pills, in doses of '05 grm. per day, and in the others subcutaneously '2 grm. to 60 Aq. The injections were made every two or three days, and were from six to twelve in number. Both pills and injections were well borne; there were neither abscesses nor infiltration, and very little pain was complained of.

13. Salicylate of mercury in the treatment of syphilis.

Dr. Inge, of Atlanta, U.S., recommends (Archiv f. Derm. und Syph., 1889, Heft 2) the salicylate of mercury in syphilitic skin diseases, in doses of three teaspoonfuls daily of a 1-per-cent. solution. Externally, he uses it as an ointment (1 in 12) and as a powder with oxide of zinc. He regards it as superior to the perchloride, its advantages being that it does not irritate the organs of digestion or cause stomatitis. He asserts that he found it to act favourably in a few cases which had resisted the perchloride.

14. The treatment of syphilitic affections of the eyes.

Dr. Silex (Deutsche Med. Woch., 1888, No. 43) states that inunction of mercurial ointment acts better than subcutaneous injections in syphilitic diseases of the eye. From 90 to 100 grammes should be used in courses of five frictions of three grammes each, the rubbing being performed not by the patient, but by a properly qualified attendant. During the course, vapour-baths should be taken every second day; the food throughout should be nourishing, and the mercurial treatment should be followed by a course of iodide of potassium, of which 100 grammes should be taken. Out of fifty patients thus treated, forty-five had no relapse during the following eighteen months; whereas fourteen others, treated by injections, had a return of the symptoms during that period.

15. The treatment of headache due to syphilis.

Headache is a common symptom of various stages of syphilis.

It often constitutes one of the earliest secondary symptoms, when
it may be very severe or may amount only to a feeling of heaviness or dulness. It usually passes off as the cutaneous symptoms
become developed. At a later period, continuous headache

points to cerebral or meningeal mischief. At a recent clinical meeting of the staff of the Saint Louis Hospital, M. Quinquand (Annales de Derm. et de Syph., Feb., 1889) exhibited a patient suffering from an indurated chancre of the upper lip, glandular enlargement, loss of hair, and headache. The latter symptom was of a neuralgic character, and was benefited by a combination of iodide of potassium, gelsemium and atropine. M. Fournier pointed out that beside the neuralgic and the osseous forms of syphilitic headache, there was another which was often very marked in neurasthenic subjects, e.g., in hysterical women who had contracted syphilis. For this form of the disorder, he had found hydro-therapeutical measures to be the most effective. He further stated that persistent headache was a common symptom of takes of syphilitic origin.

16. A new preparation of mercury for the treatment of syphilis.

Dr. Stukowenkow recommends a preparation, which he terms "hydrargyrum benzoicum oxydatum" (Archiv f. Derm. v. Syph., 1889, Heft 3). It contains 42 per cent. of mercury, and has been used externally, internally, and subcutaneously for syphilis and for soft sores. For the former he recommends intramuscular lar injections of a 1-per-cent, watery solution, or a 10-per-cent, suspension in vascline and oil. Two deep injections should be made once a week, and four to six are necessary to procure disappearance of the symptoms. They cause neither abscesses nor intiltration; but burning pain is sometimes complained of. Internally the preparation may be given in pills 01 to 04 gramme per day. For soft sores a lotion of 1 to 3, to 480 Aq., may be used, a little salt being added to render the mercurial more soluble.

17. The inconveniences and dangers of treating syphilis by subcutaneous injections of mercury at long intervals.

The "Year-Book of Treatment" for 1889 contained an account of various methods of treating syphilis, by injecting at certain intervals either soluble or insoluble mercurial preparations. It was alleged by several authorities that the hypodermic method of administering the drug constituted a distinct improvement upon all other plans. Dr Hallopeau (Annales de Derm, et de Seph. Jan., 1889) considers that this method is dangerous, and that the precision claimed to be connected with it is illusory. The treatment with grey oil, employed indiscriminately for all cases. (Ap see them to grave dangers for it takes no account of possible intolerance of the dreg. He reports a case in which

five injections at intervals of eight days set up such profuse stomatitis that the patient's life was in jeopardy. The local symptoms were most severe; the swelling of the tongue caused preparations to be made for tracheotomy. The patient was kept alive by nutrient enemata. Such an accident, Dr. Hallopeau remarks, is almost impossible when the drug is administered in other ways. The dose can be more easily graduated and the medicine can be stopped on the first appearance of excessive action. On the other hand, when a depôt of mercury has been established in the body, the effects of the drug cannot be checked.

18.—Fatal results of subcutaneous injections of calomei.

Prof. Rüneberg, of Helsingfors (Deutsche Med. Woch., No. 1, 1889), records a case in which death resulted from this method of using mercury, and points out its possible dangers. The patient, on admission into hospital, was suffering from frequent epistaxis, ulceration of gums, headache, and signs of anæmia. Four months previously there had been symptoms of syphilis, for which subcutaneous injections of calomel had been employed, three within a month, in doses of one-tenth of a gramme. The last injection was made a fortnight before admission, and probably some of the drug remained unabsorbed. The patient was too ill for an incision to be made; the stomatitis increased, coma supervened, and death occurred three weeks after the last injection. The post-mortem appearances were those of mercurial poisoning and dysentery. The injected spot contained evidences of mercury, but an incision would not have relieved the symptoms. The patient had probably been the subject of pernicious anemia, and the fatal result must cause earnest reflections as to the advisability of using insoluble preparations for injections. Other fatal cases have been recorded by Drs. Zarevicz, of Cracow, Kraus, Grawitz, Steffeck, and Smirnoff. In one case the patient was a man of thirty, and well nourished. Two injections of one-tenth of a gramme each were made within a week. On the day after the second injection diarrhea, with bloody stools, vomiting, and anuria, set in, and the man died five days afterwards. The post-mortem appearances showed that it was clearly a case of acute mercurial poisoning; they resembled those of epidemic dysentery. Dr. Rüneberg admits the efficacy of the method as regards the disappearance of symptoms, and the convenience of making few injections, but points out that there are no means of modifying the symptoms of mercurialism after they have appeared. The imaginary exactitude of the doses is therefore an illusion, and the physician cannot check the supply to the system, although he knows that it is doing mischief. Accidents may occur with any method, but in other plans of administration the medicine can be stopped. Soluble preparations are safer for injections; but we can never tell beforehand what the result of the insoluble preparations will be. If used at all, very small doses should be employed; they are out of place in anamic subjects. In the cases mentioned the question presents itself as to whether the calomel could have got directly into a blood-vessel, and thus have caused rapid poisoning. Rüneberg thinks this quite possible, and alludes to cases in which a solution of the perchloride, used to wash out the uterus after delivery, caused fatal results.

19. The treatment of syphilis in children.

Dr. Jacobi, in the Archives of Pediatrics, Nov., 1888, p. 641, et seq., points out that a syphilitic child must, if possible, be suckled by the mother, no matter whether the latter does or does not show signs of the disease. At the same time, both must be treated energetically with antisyphilitic remedies. The child must not be given to a healthy wet-nurse; but if this rule be broken, the danger must be clearly pointed out to the woman, and her nipples should be protected by shields. Both parents should be thoroughly treated whenever there have been several abortions, or other indications of syphilis. The hereditary disease should always be treated by mercurials, and preferably by calomel, of which 3 mgr. to 1 etgm. should be given thrice daily for several months, Dover's powder being added, if necessary, to check diarrhea. Warm baths containing \(\frac{1}{2} \) to 1\(\frac{1}{2} \) gramme of the perchloride are likely to be useful as adjuncts, and the same treatment is suitable for syphilis acquired in infancy. In very severe cases of congenital syphilis, affecting internal organs, the subcutaneous injection of the perchloride in daily doses of & to 1 mgr. is advisable. When bones or glands are affected, the iodide of potassium in doses of 30 etgr. to 11 gramme daily should be combined with the mercury, and the treatment must be continued until all signs of the disease have disappeared.

The controversy as to the curability of syphilis is one of great importance to medical practitioners and to patients. There are many reasons for believing that the disease is due to the presence of a specific micro-organism, and the all-important question, so far as regards treatment, is whether we possess any remedy which will destroy the microbe, or at least neutralise its effects. It is hardly necessary to say that we have no perfectly demonstrative evidence that any such remedy has yet been discovered; but,

judging from experience, it is highly probable that mercury possesses these powers. Its good effects are not manifested in all cases; the general health and condition of the patient, the time at which he comes under notice, his mode of life, his attention to the advice given by the surgeon, and various other circumstances, materially influence the result of a course of treatment by mercury. Under favourable circumstances, often difficult to secure, if the drug be used in sufficient quantity, and for a lengthened period, it is assuredly capable of arresting the progress of the disease, and of preventing the development of further symptoms. No new remedy of any importance has been suggested during the time that has elapsed since the publication of the last "Year-Book." The fatal results, in a few cases, of the subcutaneous injection of mercury should cause surgeons to hesitate before adopting that method. Drs. Rüneberg and Hallopeau's comments on the subject deserve careful attention. No new works on syphilis have been published in Great Britain, but several have appeared abroad. The most noteworthy are (1), a large treatise on venereal diseases by Prof. Giuseppa Profeta, of Palermo. He disapproves of excision, and recommends mercury and the iodide in the early stage, and continued according to circumstances. (2), Prof. J. Neumann's work, "Lehrbuch der Venerischen Krankheiten und der Syphilis," of which only the first part, dealing with blennorrhagic affections, has yet appeared. (3), "Lehrbuch der Haut und Geschlechtkrankheiten," by Dr. E. Lesser. The second part, recently published, of this work is devoted to a consideration of venereal and syphilitic disorders. It contains nothing new with regard to treatment. Dr. Lesser advocates the early administration of mercury, and several courses of mercurial treatment with intervals between them

THE DISEASES OF WOMEN.

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1. Introductory.

This year (1889) has not been marked by any special advance in treatment, or by the introduction of any new methods. While this renders a report less satisfactory, it is great matter for congratulation, as past unwise and really irrational treatment, especially in minor gynecology, has brought deserved discredit on one of the most brilliant of the modern medical sciences. How much good has been done by scientific pathology, on the other hand, is well shown by the steady advances in the treatment of genital tubercular disease since Koch's great work on the bacillus tuberculosis.

Apostoli's treatment is still enthusiastically advocated by some, notably by Dr. Thomas Keith. On the whole, it has not held the position its followers assigned to it, and probably it will ultimately take a place, useful enough in its way, much below what its enthusiastic believers at present give.

The anterior fixation of the uterus to the abdominal wall by abdominal section has had papers devoted to it by Leopold. Prochownick, and others. It is to be remembered that when done after removal of the uterine appendages, it is performed for a uterus which will ultimately atrophy. By the operation the uterus is drawn forward to an abnormal extent, and it must be kept in mind that peritoneal adhesion to the anterior abdominal (Meckel's diverticulum, for instance) may give rise to intestinal obstruction. Hysterorraphy at present, therefore, does not give much promise of an extended trial.

In other questions the position is much as indicated last year. Text-books by Skene and Lawson Tait have been issued recently, and a short résumé will be given of new treatment advocated in these.

2. On the suturing of the retroflexed uterus to the auterior abdominal wall.

Leopold (Volkmann's Sammlung, 333) gives an account of several cases of these, which are briefly as follows:—

Case 1.—Retroflexion of virginal uterus; polypoid subperitoneal fibroid; removal of fibroid, and anterior suturing of fundus uteri. Cure.

Case 2.—Double and severe oophoritis and salpingitis: uterus retroflexed and fixed: separation of adhesions: castration and anterior suturing of fundus. Cure,

CASE 3 .- As in 2.

Case 4 .- Simple retroflexion of uterus with general and local

discomfort: anterior suturing and cure.

Case 5.—Fixed retroflexion of uterus: left oophoritis and salpingitis: separation of adhesions difficult: removal of left appendages: anterior suturing. Cure.

Case 6 .- Retroflexion of mobile uterus: menorrhagia: cas-

tration and anterior fixation. Cure.

Leopold has operated in all on nine cases, and lays down the following indications for it:-

1. In cases of castration for chronic oophoritis and salpin-

gitis, whether the uterus is fixed or mobile.

2. In removal of tumours which kept the uterus permanently

retroflexed (subperitoneal fibroids, parovarian cysts, etc.).

 In simple backward displacements of the mobile uterus when the patient's suffering can be traced to this alone, and all other forms of treatment have been fruitless.

Under the first indication are grouped inflammatory conditions of the appendages, gonorrhead or puerperal; here it is best to do

double castration.

In treating adhesions Leopold points out that these can be best separated with the index finger; bleeding is rare. If it persist, a small roll of iodoform gauze can be pressed on the bleeding point, and left till the close of the operation. If the adhesions are firm, then great care must be taken in separation, as the bladder, rectum, or ureter may be involved. Leopold recommends the operator seizing the fundus with the middle and index fingers, and pressing down, the fingers of an assistant in the rectum or vagina giving counter pressure. Thick and hard adhesions are best clipped with scissors, or cut with the knife itself, to avoid tearing of neighbouring organs. Leopold fixes the fundus uteri forward with three sutures passing through the abdominal wound. The first suture passes about half to one centimetre in front of the tube; the second, between it and the

tube; and the third, a half to one centimetre behind the tube. sutures pass transversely below the peritoneum and muscular layer, about two to three millimetres deep. These are removed in fourteen to eighteen days. Leopold finally points out the difference between his method and that of Czerny, Sanger, Olshansen, and Klotz. Czerny fixes the fundus forward with catgut sutures which pass only through fascia and peritoneum of abdominal wall, and are thus dropped, as it were; Olshausen and Sänger pass silk-worm gut from one side of abdominal incision to the round ligaments; while Klotz fixes the tube or ovarian pedicle forward, and passes a glass drainage-tube behind the uterus down to Douglas's ponch.

Leopold finally discusses whether in cases of fixed uterns and inflamed appendages it would not be better to remove the whole

organs per vaginam!

3. Laparotomy in retroflexion of the uterus.

Kustner (Archiv für Gynäk., Bd. xxxv.) holds that the cases of fixed retroflexion requiring laparotomy are rare. He prefers to separate the adhesions with Paquelin's cautery, so that fresh ones are not formed. In two cases where the fundus uteri had been sutured to the abdominal wall, abortion happened in subsequent pregnancies.

Frommel condemned ventro-fixation. In one case he sutured the retractores uteri (uterosacral folds) with catgut.

only on one side.

Sanger had performed ventro-fixation twelve times -five times for retroflexion, and seven times in castration. In one case pregnancy occurred, and the patient aborted at the twenty-second He believed that pregnancy could go to full time. In none of his cases was there bladder trouble; the uterus remained mobile, and kept its new position.

Leopold had no pregnancies in his ventro-fixation cases, but in a pregnancy following Cæsarean section, where the uterus was adherent o the abdominal wall, no disturbance took place.

Hegar spoke against ventro-fixation, both in cases where there was relaxation or adhesion. In the latter instance the appenda s were usually involved.

4. On the treatment of uterine tumours by electricity.

Dr. Thomas Keith (Brit. Med. Journ., June 8, 1889) gives in his introductory remarks a criticism of some of the old methods other than surgical, applied to uterine fibroids. The method adopted by Sir James Simpson was to puncture the tumour with large steel needles, and to pass the interrupted current for about half an hour, the patient being under chloroform. One fatal case came under his notice then, and "disasters were so common that it was speedily given up." Cutter's method he also condemns, but speaks more favourably of curetting. In those cases of sudden and unexpected hemorrhage threatening the patient's life, plugging the vagina will avert a fatal result. His own results by hysterectomy were three to eight per cent. mortality in private, and a four times greater mortality in hospital. Dr. Keith then goes on to say that the marvellous results of Apostoli's treatment made him give up the offer of a generous donor to equip a private hospital for surgical operations on fibroids. The treatment by electricity requires patience, and several months of treatment; but at the very least it reduces the tumour by a half, or even twothirds, takes off tension, and relieves bladder pressure. Given a woman with a large bleeding fibroid, blanched almost to death from years of hæmorrhage, and see her some months after this treatment, you would scarcely know her, the improvement is so great. He then narrates two fatal results after hysterectomyone in an English provincial town, and one in London-cases he had seen previously and refused to operate, and criticises these strongly. He also gives details of a case under his own management where eighteen negative applications were made to reduce the size of the tumour, and where the woman subsequently died from hæmorrhage. She had also had feverish symptoms and splenic tenderness. Such a case, Dr. Keith adds, has taught him "to impress upon patients the necessity of great care during the time that electrical treatment is being carried on, especially when negative electricity is being used." Dr. Keith concludes by strongly advocating Apostoli's method as against hysterectomy, mentioning the curious fact that in ten per cent. of the cases where he has removed the uterus and appendages, there has been insanity sooner or later.

A discussion on an estimate of the value of electricity in gynecology.

Dr. W. S. Playfair (Section of Obst. Medicine and Gynecology, Brit. Medical Assoc. Meeting, Leeds, August, 1889) opened the discussion on this subject. He believes that in impacted fibroids the electro-negative puncture is well worthy of trial, and eases pressure symptoms. He adds, somewhat naively, however, that "even very large masses of fibromyomata occasionally spontaneously abort and practically disappear," and that it is likely "a powerful agent such as electricity may be able to inaugurate changes of the nature of which we are ignorant."

The use of the positive current to the uterine cavity in bleeding fibroids he regards as very valuable. He considers,

most others do, that the hæmestasis is due to the caustic action of the positive pole, and has had good results from ten applications. In chronic catarrh of the uterus, and in membranous dysmenorrhom, he has got better results from the negative current than from any other form of intra-uterine medication.

He gives full details of a case of obstinate pelvic peritonitis, where the negative electric current applied vaginally, the current strength being 100 milliampères, caused this obstinate exudation to disappear in three weeks. The patient had seen several consultants previously, one of whom had proposed to remove the appendages. Massage and abundant feeding benefited her general health, but did not alter the pelvic condition.

He concludes that-

 The continuous current is capable of effecting much good in certain selected cases otherwise little amenable to treatment; and its introduction is therefore a distinct gain to gynecology.

It is an agent of considerable power, and therefore, if rashly and injudiciously used, it is also capable of doing

much harm.

 It involves the use of a costly plant, and is troublesome and tedious to work.

 Since the proper selections of cases requires, moreover, much special knowledge and great care, it is never likely to come into very general use.

Dr. Cutter described his method (vide "Year-Book, 1888) and gave his results. In fifty cases there were four deaths. In one case, in 1887, the strength of the current was 500

milliampères.

Mr. Lawson Tait criticised Dr. Playfair's paper as being, not an estimate of the value of electricity in gynecology, but a record of a number of impressions which he (Dr. Playfair) had acquired. He urged that the successful case of absorption of a pelvic peritonitic effusion given by Dr. Playfair was really a hamatoma of the left broad ligament. Mr. Tait's mortality in the radical treatment of 262 uterine myomata was 1.23 per cent.

6. A case of intramural fibroid: Apostoli's treatment: enucleation.

Pischel (Centr. für Gynäk., June 29, 1889) records a case of intramural fibroid (about the size of a child's head) expelled under Apostoli's treatment. At first he employed external electrodes, the strength of the current being 80 milliampères. Three séances of this improved the patient's condition so much that he used Apostoli's method, an aluminium sound being passed into the uterus, and a current of 80 to 130 milliampères passed. The

bleeding at the periods was much increased, and ultimately the

tumour was expelled.

[In bleeding cases the positive pole should be used internally, from its hæmostatic action. The same enucleation would probably have followed the use of the positive pole, but blood would have been saved.]

7. A new method of performing hystero-myomectomy.

Dr. H. A. Kelly (Amer. Journ. of Obst., April, 1889) describes a method of hysterectomy as follows :- The abdomen is incised as usual, the tumour turned out, and a rubber ligature made to constrict the neck. The uterus is then removed above the ligature by V-shaped incisions. The raw surfaces are then approximated by stout buried continuous catgut sutures, and the peritoneal edges by interrupted ones. Before this is done, the cervical canal is burned out with the actual cautery, so as to avoid septic infection. The peritoneal sutures are left long, so that the stump can be drawn well up. The uterine arteries are then tied on each side by passing a silk ligature through the substance of the cervix, the rubber ligature is removed, and then the peritoneal surface of the stump united to the parietal peritoneum by continuous silk or catgut. No other sutures are applied, but the ligatures uniting the peritoneal edges of the stump are held by artery forceps. The space between the free portions of the stump and the muscular and skin edges of the abdominal wound is packed with mercurial gauze.

8. Partial extirpation of ovaries and tubes.

A. Martin (Volkmann's Sammlung, No. 343) considers here the question of cases where one can excise the degenerated portion (to the naked eye) of an overy, leaving the apparently sound

portion.

Sir S Wells, in 1864, after removing a diseased ovary, evacuated the fluid contents of the small cysts (hydrops folliculorum) of the opposite one, and returned it to the abdomen. The patient recovered, was married, and bore children normally. Schroeder was the first to excise a dermoid cyst from the ovary, suturing the wound. The patient recovered, and ultimately conceived. Schroeder gave an account of seven such cases, and Martin supplemented it with four of his own. Martin's first case (prior to Schroeder's) was like Wells's one, and conception occurred afterwards. Schatz also has recorded a case where remains of the follicles in the grasp of the ligature enabled the patient to conceive. [Battey has also recorded a similar case.] The following are Martin's cases in brief:—

Case 1.—Ovarian cyst removed on right side. The left ovary had two cysts the size of cherries; the portion of the ovary with these was excised, and the wound closed with silk. Recovery, and ultimately several labours.

Case 2.—Patient had abdominal pain, menorrhagis, and both ovaries considerably enlarged. The left ovary was removed, but only the apparently diseased portion of the right one, the part left being about the size of a bean. This patient recovered; menstruated five months afterwards. She ultimately died from ileus, and on section the part of the right ovary left was found bigger than at the laparotomy, and with traces of fresh corpora lutes.

These will be sufficient to give an idea of the scope of this partial resection. Martin gives an account of seven cases where he applied it to the tubes. In these the principle of the procedure was to incise the distended tube in its long axis, evacuate contents, and to sew each edge with the continuous catgut suture, bringing the ovary by suture close to the artificial opening of the tube.

Case 17.—Patient, thirty-two years of age, complains of menorrhagia. On the left side of the uterus there is apparently a tubal swelling the size of a child's head. Laparotomy performed; bowel and omentum adherent. The tumour was a two months' extra-uterine gestation, but no fectus was found. The right ovary was healthy, but the tube greatly lengthened, twisted, and with atresia of ostium abdominale. The tube was opened, the edges of the opening were sewn as already described, and fixed to the ovary.

The convalescence of all the patients was not retarded, menstruation became normal in all, two had children, and one conceived twice. Martin's conclusions are:—

- Partial extirpations of circumscribed changes in the ovary (new formations, hydrops folliculorum, chronic oophoritis) do not hinder convalescence.
- The resection of tubes with atresia, or otherwise diseased, gives as little disturbance as in the partial resection of ovaries.
 - In all, menstruation continues.
 All have capability of conception.

9. A contribution to the operative treatment of tubal disease.

Skutsch (Archiv. für Gynäk., Bd. xxxv.) here recommends that in hydrosalpinx the tubes should not be removed, recording a case where he did abdominal section, incised the tubes so as to remove the fluid contents, and then stitched the incision in the tube. If the contents are purulent, the incision in the tube can be stitched to the abdominal wound, and, when discharge has stopped, the continuity of the tube restored by a further operation.

10. Further consideration and ultimate results of the total extirpation of the uterus, at the Imperial Gynecological Clinique, Dresden.

Münchmeyer in 110 cases at the Dresden Hospital records a mortality of 5.45 per cent. In eighty cases of cancer, five per cent. died. Of the seventy-six survivors, sixty-two are living, three having return. Of those who died, ten had recurrence. Those free, are so after the following number of years:—

Years.					Patients.	
After	54					1
2.3	44-4	-				4
11	34					6
13	3					2
**	23					3
**	24					2
111	24					2
11	2				1.81	8
- 810	14				***	3
-181	14			**		3
16.1	1-14	1112		110	111	4

In fifty-two consecutive cases there was no death. In thirty cases, total extirpation was undertaken for the following causes, viz., seventeen times for myoma, five times for prolapsus uteri, five times for severe neurosis, thrice for appendage disease. Münchmeyer discusses whether one should open the peritoneal cavity from above or below. At any rate, the cases of total extirpation recover like healthy puerperse.

Freund, Senr., narrated a case of cervical cancer living eleven

years after removal of the uterus by laparotomy.

Hegar preferred castration for myoma to total extirpation.

 Operations on tumours of the pelvic connective tissue by perincotomy.

Sanger (Archiv. für Gynäk., Bd. xxxiv.) describes the removal of a dermoid ovarian cyst of the pelvic connective tissue by perineal incision. The tumour occurred in a woman who had borne nine children, six times spontaneously. In one labour a tumour hindering delivery was tapped per rectum.

When Sänger examined, it was found that the tumour, about

When Sanger examined, it was found that the tumour, about the size of a child's head, lay more in the right half of the pelvis and behind vagina and bowel. It was removed as follows:— A sagittal incision was made from the right labium majus to within two centimetres of the anus on its outer side. The levator ani was incised, the tumour enucleated, and the cavity stuffed with iodoform gauze. Recovery easy.

By experiments on the cadaver Sanger found that the cavity of the true pelvis could be explored by perineal incisions (perineotomy) to one or other side of the middle line, and subperitoneal

tumours and hæmatomata treated.

12. My experience with the flap-splitting operation for lacerated perineum.

Dr. Mundé (American Journ. of Obst., July, 1889) describes Tait's operation for incomplete laceration of the perineum, and also for complete tear through the sphincter. In seventeen cases (eight complete lacerations, nine incomplete) he had perfect results, but the rare experience of a death from septicæmia. There is a good plate of the incisions made in cases where the sphincter is torn.

13. Genital tuberculosis.

Werth (Arch. für Gyn., Bd. 35, Hft. 3) takes up briefly tubal tuberculosis, and recognises two forms:—(1), Mucous membrane of tube destroyed by a caseous condition; contents of tube caseous, with abundant bacilli. (2), Mucous membrane of tube chronically inflamed, wall thickened from increase of connective tissue; tubercles in the mucous membrane, with abundant giant cells, but few bacilli; slight tendency to caseous degeneration, with fluid contents and detritus. He quotes three operative cases from Stemann's dissertation (Contributions to the Knowledge of Tubercular and Gonorrheal Salpingitis). The first case belonged to the second division given at (1); the second was tubercular; the third, pyosalpinx. Inoculation trials with the contents of the tube gave no result. In such cases removal of the tubes is right; but in peritoneal tuberculosis with ascites the tubes should be left, unless enlarged, and only the fluid removed.

Elischer (Budapest) had, two years ago, a case of miliary tuberculosis of peritoneum and tubes recover after incision. The tubes should not be removed unless purulent foci were present.

Hegar pointed out that thickening of the uterine end of the tubes was found in forms of tubal inflammation other than tubercular. In general widespread peritoneal tuberculosis the tubes should be left, as their removal was difficult; in circumscribed cases they could be removed without danger.

14. The manual treatment in gynecology.

Dr. H. J. Boldt (American Journ. of Obst., June, 1889) gives

an account of Brandt's manual treatment (vide "Year-Book," 1889), and speaks favourably of it. In one special case—incontinence of urine—in a woman aged thirty-two, where the trouble had come on gradually after birth, a complete cure was effected. The principal manœuvre employed was percussion of the neck of the bladder per vaginam.

15. "Diseases of Women, and Abdominal Surgery, Leicester: Richardson and Co. Vol. I."

Although this volume is largely made up of Mr. Tait's previous publications ("Diseases of Women," 1873; "Diseases of Ovaries," 1883; and "Ectopic Gestation," 1889), it contains statements of Mr. Tait's views on disputed points in gynecology, as well as new material of great interest at present. The special points to be noted are as follows:—

Pessaries.—"In fact, my belief in pessaries has so much diminished with experience, and I have seen so much more harm than good from their employment, that I have practically abandoned their use for the ignorant women who form the bulk of our hospital patients. Even in private practice their employment

in my hands becomes less and less frequent."

Vaginal fistulæ.—Mr. Tait criticises the usual complicated instruments for the operation, and uses only Fergusson's glass speculum, a straight knife, and a curved-handled needle. He has found it easier to apply the stitches with his finger-tips only; and he recommends strongly, not the usual paring of the edges, but splits the vesico-vaginal septum, as originally recommended by Collis, of Dublin, in 1861.

Bladder.—Two forms of bladder ulceration are described—a form associated with chronic cystitis, and a chronic perforating ulcer. In the first he recommends injections of two per cent. solutions of carbolic acid and acetate of lead; in the second,

the formation of vesico-vaginal fistula.

A rare case is mentioned where large quantities of a clear fluid issued from the vagina, sometimes two to three gallons at intervals of a few weeks. This was found to proceed from two small apertures, one on each side of the urethra, Gartner's canals. In the first case the apertures were cauterised, but had to be reopened, and no further operation was tried. In a second case, which seemed like hydrosalpinx, the abdomen was opened, and both ovaries were found enlarged (both together weighed 1,000 grains). No dilated Gartner's canal could be found, but the appendages were removed as close to the uterus as possible. The discharge continued for some time, but ultimately ceased.

Vaginal hysterectomy for cancer. This is strongly condemned.

"The few cases in which the disease does not recur are clearly errors of diagnosis."

Subinvolution of the uterus.—For medicinal treatment either the bromide or chlorate of potash (5 grains) with ergot are strongly recommended as having "an almost infallible influence on uterine hæmorrhage" where no mechanical cause exists (retained placenta, polypus, cancer).

Iron should not be given until the uterine condition is cured.

Removal of uterine appendages for fibroids.—A table is given of all the cases Mr. Tait has operated on. Up till 1888 there are 272, with an average mortality of 4.41 per cent. Since July 21, 1885, up till now, in 150 cases, the mortality has been 1.53 per cent.

Broad ligament.— For myomata and cysts of the broad ligament, abdominal section and enucleation; for parovarian cysts, section and removal; in pelvic abscess, where possible, abdominal section, evacuation of pus, stitching edges of abscess to abdominal wound, and drainage.

A table of 102 cases of broad ligament cysts is given—mortality 2 per cent. A second table gives 37 cases of pelvic

abscess treated by abdominal section—all recoveries.

Removal of uterine appendages.—Mr. Tait's views on this are well known. In a table of cases operated on for chronic inflammatory condition, 474 cases are recorded, with a mortality of 2.5 per cent.

MIDWIFERY.

By George Ernest Herman, M.B., F.R.C.P.,

Obstetric Physician to, and Lecturer on Midwifery at, the London Hospital.

1. Extirpation of the pregnant cancerous uterus.

Zweifel (Cent. für Gyn., 1889, S. 193) relates a successful case of complete removal of a uterus six months pregnant, with cancer of the cervix: the lifth case of this operation on record, the second successful case.

2. The influence of paludism on pregnant women.
Dr. Rodrigues dos Santos, of Rio de Janeiro (Arch. de Toc., 1889,
p. 245), says that acute paludal poisoning produces uterine and
placental hæmorrhages, and consequent abortions. Hypertrophy
of the placenta is often seen. The abortions are commonly in
the early months. During pregnancy acute attacks are either
not cured or cured with difficulty, in spite of the administration
of quinine; but when abortion has been produced cure is rapid.
It seems as if the paludal poison localised itself in the placenta,
and was expelled with it. In chronic cases pregnancy usually
goes to term, but the children are feeble and often rickety, and
hæmorrhage is often severe. As to treatment, quinine should be
given freely; it does not produce abortion: abortion is due to
the poison, not to the remedy.

3. Abdominal puncture of the uterus in hydram-

Dr. Lepage writes on this subject (Annales de Gynéc., 1888, p. 257). He points out that in certain cases of hydramnios the abdominal distension may be such that it is difficult, or even impossible, to make the diagnosis of pregnancy by the ordinary methods. In these cases abdominal puncture is doubly indicated; it clears up the diagnosis and relieves the patient. It does not bring with it danger to the mother, although it is attended with some risk of abortion or premature labour. But this is of very small importance, because in cases of great dropsy of the amnion the pregnancy seldom goes to term, and the focus generally is either dead or presents some malformation.

4. Extra-uterine gestation.

Cases illustrating the clinical history and the treatment of this disease have been numerously recorded. Space does not permit me to notice cases proving fatal by hæmorrhage; cases of uncertain diagnosis recovering after the use of electricity, and supposed to have been cured by it; or cases in which an extra-uterine gestation has been removed, either after more or less hæmorrhage had taken place, or after the death of the child. With regard to cases of operation, I may note that Mr. Lawson Tait's view as to the frequency with which extrauterine gestation goes on under the peritoneum, between the folds of the broad ligament, is borne out by many cases, published during the year, and also that in the operation the practice of stuffing the cyst with gauze to arrest hæmorrhage has been often resorted to with advantage. I can refer more particularly only

to cases that present unusual features.

First, as to the danger of letting extra-uterine gestation go on to term; a practice which was for long regarded as the right one, and which Spaeth (Zeitsch. für Geb. und Gyn., Bd. xvi., S. 269) still recommends in cases that do not come under notice until after the mid period of pregnancy. Fasola (Cent für Gyn., 1888, S. 616) relates a case of abdominal pregnancy in which the diagnosis was not made, and which ended by rupture of the sac. and death from peritonitis at the end of the seventh month. Dührssen (Zeitsch. für Geb. und Gyn., Band xvi., S. 193) reports n case in which, at the seventh month of pregnancy, the pressure of the fœtus on the rectum caused death by obstruction of the bowel; the gestation was abdominal, no trace of a sac being present. He quotes two similar cases recorded by others. Scaeth (op. cit.) records a case in which at the end of the eighth month symptoms of septicæmia came on, and an operation being done, the amniotic fluid was found extremely offensive. The patient died. The septicæmic symptoms were attributed to the decomposition of the amniotic fluid. Dr. J. P. Tuttle (Boston Med. and Surg. Journ. 1889, p. 117) relates a case in which an extra-uterine foctus of about four months' development was spontaneously expelled into the rectum. An attempt was made to remove the placents, but had to be desisted from on account of hemorrhage. The patient died, apparently from internal hamorrhage, six days after the opening into the rectum. This patient had been treated with electricity; the case therefore assists us to judge of the value of that treatment.

Mr. John W. Taylor (Brit. Med. Journ., 1889, p. 1217) reports a case which shows that extra-uterine pregnancy may play the

same part in the production of albuminuria as intra-uterine pregnancy. The patient at the fourth month of pregnancy passed urine containing half its bulk of albumin. The foctus was successfully removed by laparotomy, and three weeks afterwards the albumin had diminished to a trace. This case has a very important bearing on the question whether to operate or not in such cases with albuminuria. In the case in question the presence of albuminuria caused some hesitation before deciding

to operate.

Rosthorn (Wiener Klin. Wochensch., 1888, pp. 27 and 28) describes a case of pregnancy in the rudimentary horn of a bicorned uterus: a condition which, from a clinical point of view, is practically the same as extra-uterine pregnancy. In this case the pregnancy went on without pain to eight months. There was very plain fluctuation. The opposite horn of the uterus was not enlarged. These features of the case led to its being diagnosed as an ovarian cyst. By operation, the gestation sac was completely removed, with its ovary and tube. The pedicle connecting it with the opposite horn was 5 cm. thick; but there was no communication between the two uterine cavities. Dr. Rosthorn gives full references to the literature of the subject.

The ideal operation in extra-uterine gestation has been performed by Olshausen (Zeit. für Geb. und Gyn., Band xvi., S. 191). The patient reckoned herself about ten days short of term. The child was free in the abdominal cavity, without a sac. This had burst six days previously, and appeared to have been formed by the right tube. The child was living. The placenta and the remains of the sac were removed. The operation was not difficult. The mother eight days afterwards was doing well.

Dr. R. P. Harris (Am. Journ. of Med. Sc., Sept., 1888) has collected thirty cases of primary abdominal section: that is, laparotomy when the child is living and viable; of these five

mothers recovered.

5. Albuminuria in pregnancy and labour.

Dr. Leopold Meyer (Zeitsch. für Geb. und Gyn., Band xvi., S. 215) gives the results of an elaborate investigation into the frequency of albuminuria in pregnancy and in labour, its prognosis, and its relation to feetal death and to placental disease. He examined the urine of 1,124 who were pregnant and 1,138 in labour. He found in the pregnant albuminuria in 5.4 per cent., casts in 2 per cent. In labour, albumin was present in 25 per cent., casts in 12 per cent. Albuminuria with casts was rather more frequent in first pregnancies than in subsequent ones. Age did not seem to affect its frequency. In the pregnant women with

albuminuria, premature labour occurred more often, and earlier, than in the pregnant women without albuminuria. Albuminuria was sometimes observed to develop during labour. Albuminuria developing during labour, and without casts, as a rule rapidly diminishes after delivery; while in cases in which the disease began during pregnancy, it often takes long to disappear. In such cases the tendency to cystitis from catheterisation appears to be increased. Albuminuria with casts in most cases subsides quickly after delivery: in at least half by the fourth day. many it lasts longer, and often lasts the longer the larger the quantity of albumin. Some do not recover : and the prognosis is least favourable when the disease commenced during pregnancy. Albuminuria is more common with premature labours than with labour at term, especially in early premature labours and in those coming on without evident cause. Accidental harmorrhage, and the presence of infarcts in the placenta are more frequent with albuminuria than without it; and most frequent when albumin is abundant and casts are present.

The value of pilocarpin in pregnancy, labour, and the lying-in state.

Dr. John Phillips in an exhaustive paper (Obst. Trans., 1888. p. 354), in which the literature of the subject is fully summarised. comes to the following conclusions. Pilocarpin is able, in a certain number of cases, to induce labour, but is not in any way to be relied upon as an ecbolic. During the dilating and expulsive stages of labour the drug is equally productive of increase and intensification of labour pains with ergot, and with none of its ill effects. (The evidence adduced in support of this statement is scanty.) The drug is useless post partum and to stay hæmorrhage. In eclampsia such dangerous symptoms may manifest themselves that the author feels bound to warn others against its use, especially when coma is pronounced. It should never be used when there is pulmonary or bronchial catarrh or pleuritic effusion. Except in the circumstances above mentioned, it has no evil effect on the mother; but in puerperal eclampsia it does slightly endanger the life of the fœtus. Preparations of opium given before pilocarpin materially add to its dangers. The patient should always lie down for an hour after the administration of pilocarpin, as giddiness and irregularity of pulse may follow movement into the upright posture. It should never be injected without informing the patient fully of its probable effects.

7. New instrument for inducing labour.

M. Champetier de Ribes (Ann. de Gyn., 1888, p. 401) describes

an instrument which he has devised for the induction and acceleration of premature labour. It consists of a bag, having a tube attached to it. It is introduced into the uterus empty and folded, and then water is pumped into it so as to distend it. In mode of action it is, therefore, the same as the "Barnes's bags," so well known in Great Britain. The instrument of M. Ribes differs from Barnes's (1), in being conical, the apex of the cone being below, and entering the cervical canal, instead of fiddle-shaped; (2), in being made of inelastic material (silk made waterproof), (3), in being very much larger, so that when the expanded bag has passed through the cervical canal the child can be quickly delivered. The author describes its mode of action by saying that "the case is transformed into a twin labour, in which the first child consists of a head only." The mode of dilatation is more physiological, taking place from above downwards, instead of along the whole canal, as when Barnes's instrument is used. The bag being larger, the dilatation effected is greater. In the use of Barnes's dilators successive sizes have to be introduced; while with this instrument one introduction only is needed. In sixteen cases in which this instrument was used to bring on labour, the longest time required was twenty-six hours; the average, four hours. From the first introduction of the bag to its expulsion from the vulva, the average time was eight hours; the longest, thirty-four hours. The inventor thus answers the objections that may be made to the instrument. First, that it may lead to rupture of membranes: he replies that this is not common, and that if it happens no harm results, for the bag replaces the sac of membranes as a dilating agent, and plugs the canal so that very little liquor amnii escapes, and by it labour is so hastened that no harm to the fœtus results. Second, that it may detach the placenta: this he was at first afraid of, but has not found it happen. In one case there was a little hæmorrhage, which at once stopped when the bag was filled. Third, that the instrument increases the tension within the uterine cavity: the increase is very slight, and he has never found it do harm. Fourth, that it may displace the presenting part, and change it from a favourable to an unfavourable one: this the author admits, but points out that if this happen the conditions after expulsion of the bag are very favourable to version. This answer applies also to the objection that it may cause procidence of cord or limbs. The inventor especially recommends this instrument in cases of contracted pelvis. Should it appear to cause excessive tension of uterus, it need not be quite filled, or if full, some of the fluid may be allowed to escape. Chennevière (Nouv. Arch. d'Obst. et de Gya., Suppl., 1889, p. 125) recommends as a means of inducing labour plugging the vagina with iodoform tampons—we presume either iodoform gauze or wool well dusted with iodoform. Doléris and Porak have recommended the use for the same purpose of a sponge impregnated with iodoform. If plugs are used, the number introduced should be counted.

8. The diagnosis of placenta prævia by palpation of the abdomen.

Dr. Herbert R. Spencer (Obst. Trans., 1889, p. 203) gives the following directions for diagnosing placenta prævia by abdominal palpation. The patient lies on her back. The bladder should be emptied. The examination is made between the pains. In an ordinary vertex presentation the occiput and forehead are to be easily and distinctly felt by the fingers of the two hands laid out flat outside the recti, with the points downwards. If, however, placenta prævia be present, and the placenta be in front or at the side, an unusual swelling may be noticed, and the head is no longer felt where the placenta is situated; in lateral placenta prævia the head may be even more distinctly felt on the opposite side than in a normal labour. Where the placenta is placed it feels as if the fingers were kept off the head by a mass of elastic consistence, something like that of a wetted bath-sponge; there is nothing hard or even firm about it. In some cases a distinct edge is to be felt. The edge is shaped like the segment of a circle. Within the circle all is obscure to the touch. Outside the circle the head or other parts of the child are distinctly felt. Impulses to the head are not distinctly perceived through the placenta, whereas impulses to the head through the placenta are plainly felt at the spot where the placenta is absent; this applies also to the combined vaginal and abdominal examination. In doubtful cases several examinations should be made, and it is to be borne in mind that the placenta always keeps the same position. The examination should be conducted gently, and a considerable time may be necessary. If the head is anywhere plainly and distinctly felt, it may safely be decided that the placenta is not at that spot. In the discussion which followed facts of clinical experience were mentioned, which showed that the placenta cannot always be identified by palpation, although this may sometimes be done. In cases of hæmorrhage, in which the cervical canal is not large enough to admit the finger, the method so carefully described by Dr. Spencer may be found useful.

Antipyrin as a uterine sedative.
 Sielski (Cent. für Gyn., No. 34, 1888, S. 547) relates cases in

which the effect of antipyrin in relieving the pain of uterine contractions without diminishing their power was "astonishing." The dose given was 15 grains. Auvard and Lefebvre (Arch. de Toc., 1889, p. 649), after summing up a good deal of the literature of the subject, as well as giving ten cases observed by themselves, come to the following conclusions: (1), In certain particularly impressionable women, the administration of antipyrin during labour seems to produce relief which is real, but often slight, and due, it may be, to the special effect of the drug, but it may rather be to the moral and suggestive influence of the hypodermic injection. (2), In the majority of cases antipyrin has no effect. (3), Therefore, without denying the good results that may be exceptionally attained by the help of this drug, its happy influence on the pains of labour must be considered as very inconstant; and it cannot in any way be placed parallel with chloral or chloroform in obstetrical doses, the anæsthetic power of which is to day unquestionable. (My own experience leads me to think that antipyrin is a most valuable drug, which will often convert frequent, painful, ineffectual uterine contractions into more powerful and less painful contractions at longer intervals; and will produce also a feeling of refreshment and invigoration.) In the Lancet and Brit. Med. Journ. numerous records of experience will be found.

10. The treatment of puerperal eclampsia,

Dr. Auvard (Arch. de Tocologie, p. 647) describes the treatment of puerperal eclampsia with Gallic orderliness of arrangement, He says our means can be grouped in six categories: three of capital importance, three of secondary; a great and a little therapeutic tripod. The great tripod is composed of anæsthesia, bleeding, and uterine evacuation. Anæsthesia should be used in every case, unless so mild as to require no treatment. It is obtained by chloral or chloroform. Chloral may be given in large doses: from 150 to 250 grains may be given in the 24 hours, as much as possible by enema, and supplemented by chloroform. Bleeding should be employed in plethoric cases; from 16 to 30 ozs., or, exceptionally, even more may be taken. Uterine evacuation should be obtained as promptly as possible, but without violence. If labour has not begun, as a rule we should wait; labour should only exceptionally be induced. If dilatation has begun, the accouchement forcé should be avoided. Immediately that dilatation is complete, labour should be ended by forceps or turning. The little tripod is composed of purgatives, diuretics, and sudorifics. Of purgatives there is no lack. The best diuretic is tr. digitalis, 15 to 20 minim doses. As a sudorifice, the author thinks pilocarpin may be tried. These may render some service, and to neglect them would be a fault. (Before giving pilocarpin in cases of eclampsia the reader should refer to Dr. Phillips's paper, and the discussion thereon.) Dr. Blanc (Arch. de Toc., 1889, p. 496) advises giving chloral by means of an osophageal tube in cases in which the patient cannot be got to swallow. Enemata he finds are often expelled.

11. A microbe for puerperal eclampsia.

Dr. Emile Blanc (Arch. de Toc., 1889, pp. 182 and 285) describes a microbe which he has found in the urine of patients suffering from puerperal eclampsia. He has cultivated this microbe, and injected it into rabbits, and found that it causes inflammation at the point of inoculation, fever, convulsions, and albuminuria. He has not found this microbe in the urine of women not suffering from eclampsia.

12. The dangers of cephalic version in breech presentations when the cord is absolutely or relatively short.

Auvard (Arch. de Toc., 1888, p. 524) describes cases of breech presentations, in which attempts at cephalic version failed, because the head either could not be pressed into the pelvic inlet, or could not be kept there, and during delivery the cord was found twisted round the neck. He points out that if the cord be so twisted round the neck as to be made tense by an alteration in the position of the child, and the child's position be altered by manipulation. one of three things will happen: Either (1), the placenta will be detached (which is especially likely to happen if the cord be inserted near the edge); or (2) the cord will break; or (3) the child's neck will be dangerously compressed, and it may be stillborn. He relates two cases in point, in which the first and third of these accidents happened. The diagnosis of this condition is difficult, but it may be suspected if the accoucheur, on attempting version, finds an obstacle to the displacement of the cephalic and If there is the sensation of a band drawing back the head so displaced with difficulty, and if the change in position having been effected, and the head kept in its new position, an umbilical cord murmur is developed, then it may be inferred that encircling of the neck by the cord is the cause of the difficulty. Certainty is not possible. Budin (Arch. de Toc., 1889, p. 69) describes a case confirmatory of Lefour's views, and illustrates it with a diagram by which the mechanism can be seen at a glance.

13. The squatting posture as an aid to the me-

Dr. A. F. A. King (Amer. Journ. of Obst., 1889, p. 561) points

out that in the squatting posture, the one adopted during labour by many uncivilised races, and, in Dr. King's opinion, "the most ancient and primitive of all positions during childbirth," considerable pressure is exerted by the flexed thighs on the anterolateral parts of the abdomen. He considers that this thigh pressure has a powerful influence in obviating the causes of malpresentation, such as obliquity of the uterus, laxity of the uterine and abdominal muscles, excess of liquor amnii, twin pregnancy. He thinks that this posture might be utilised for the correction of malpresentations; that it would be quite possible by this means alone to rectify mento-posterior positions of the face, and possibly even transverse presentations.

14. The manual correction of occipito-posterior

In the "Year-Book" for 1888 attention was called to some papers by Dr. Emile Blanc, in which he advocated the manual rotation of the head in occipito posterior presentations, so as to bring the occiput to the front. Dr. Blanc now (Arch. de Toc., 1888, p. 552), with commendable candour, publishes two cases in which he failed to maintain this rotation. In both cases he was able to rotate the head without difficulty, but the head would In both cases he was not stay in its new position; and both were cases of deformed pelves. He says: "They prove to us how illusory it would be in similar cases to count on manual rotation to resolve the diffi-culty." (In the "Year-Book" of 1888 I cited the great authority of Ramsbotham in support of this practice, and said also that I had myself found it successful. I may quote verbatim the following sentence, which anticipates Dr. Blanc's observations. "In most cases, when the occiput is turned forwards, it will stay there; in some it turns back again directly the hand is removed. I believe the difference depends upon the degree to which the body turns with the head. In the latter case the head must be grasped with forceps while it is held in its new position." I would now add that such rotation cannot be expected to answer in flat pelves.) Doléris (Nouvelles Arch. d'Obst. et de Gyn., 1889, Suppl., p. 106) strongly advocates manual rotation both in occipito-posterior and face presentations. Tarnier (Nouv. Arch. d'Obst. et de Gyn., 1889, Suppl., p. 202, Semaine Med., Jan. 2, 1889) says that occipito-posterior positions occur in one in three or four labours; but that in 96 per cent, the occiput naturally rotates to the front. If this does not occur, aid is needed. It is useless to try with the finger to push the forehead back, or to produce flexion. Two fingers must be placed behind the ear, and then the occiput pushed

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18. Cæsarean section.

Leopold (Arch. für Gyn., Band xxxiv., S. 301) brings up to date his results of Casarean section. He has done this operation, the uterus being stitched up, twenty-five times, with two deaths, a mortality of 8 per cent. for the mothers. All the children were delivered alive, and only two subsequently died. During the same period there were ninety-two craniotomies done under equally favourable conditions, without any maternal deaths. (Leopold very properly excludes, for comparison with Cæsarean section, cases in which craniotomy was done for eclampsia, placenta przevia, or on mothers moribund from protracted labour.) Leopold's conception of the indications for Casarean section is a much wider one than that of most English practitioners. It is as follows: if with a living child delivery can neither take place naturally, nor be effected by means (forceps or turning) not injurious to the child; the relatives' assent to its performance; the mother's strength is good; there is no evidence of septic infection; the operator and his assistants are masters of the technique of the operation, and possess every needful appliance; the fætal heart-sounds are normal. The last-named condition Leopold is inclined to modify, for he thinks that when the feetal heart-sounds are irregular, or have even ceased for a short time, the child's life may yet be saved by Casarean section. He concludes by emphatically stating that it is incontrovertible that laparotomy is a much more dangerous operation than craniotomy, and Cæsarean section can only take the place of craniotomy in the rarest cases. As to technique, Leopold holds it important to turn the uterus out of the abdomen, and to put an elastic ligature round its cervix before incising it. This ligature should not be pulled too tight, lest anamia of the uterus lead to atony, and consequent hamorrhage after removal of the ligature. He uses chromic catgut for the deep stitches, fine silk for the superficial ones. Speed in the operation is important. Champneys (Obst. Trans., 1889, p. 136) relates a successful case of Casarean section, performed according to the method of Sanger, in which, with the object of sterilising the patient, a ligature of kangaroo tendon was passed round the tube with an aneurysm needle, and tied so tightly as to cut through the tube. Falaschi (Arch. de Toc., 1889, p. 484), in a successful case, also tied the tubes close to the uterus. Murdoch Cameron (Brit. Med. Journ., 1889, vol. i., p. 180) publishes a successful case, the first in Scotland, if we except one of Porro's operation performed by Berry Hart.

19. Simplification of Porro's operation.

Mr. Lawson Tatt has directed his great experience and know-

ledge to the simplification of Porro's operation (Brit. Med. Journ., 1888, p. 1100). He says "It is the easiest operation in abduminal surgery, and every country practitioner ought to be able and always prepared to perform it. No special instruments are required-nothing but a knife, some artery forceps, a piece of rubber drainage-tube, two or three knitting-needles, and a little perchloride of iron. My method of operating is to make an incision through the middle line large enough to admit my hand. and then I pass a piece of rubber drainage-tube (without any holes in it) as a loop over the fundus uteri, and bring it down so as to encircle the cervix, taking care that it does not include a loop of intestine. I then make a single hitch, and draw it tight round the cervix, so as to completely stop the circulation. I give the ends of the tube to an assistant, who keeps them well on the strain, so as to prevent the loose knot from slipping; the reason of this being that should there be any bleeding, and any necessity for further constriction, I could secure this in a moment, without undoing any knot, and the simplicity of this method greatly commends it. I then make a small opening in the uterus, and enlarge it by tearing with my two fore-fingers, seize the child by a foot, and remove it. I then remove the placenta, and by that time the uterus has completely contracted, and is easily drawn through the wound in the abdominal wall. The constrict ing-tube will now probably require to be tightened, and the second hitch of the knot may be put on at the same time, and the work is practically done. Stuff a few sponges into the wound to keep the cavity clear of blood, and pass the knitting-needles through the flattened tube and through the cervix, and in this simple way a clamp of the most efficient kind is at once made. The uterus is removed about threequarters of an inch above the rubber tube. The usual stitches are put in, the wound is closed around the stump, which, of course, is brought to the lower part of the opening, and then the stump is dressed with perchloride of iron in the usual

Dr. R. P. Harris has collected from all countries 250 cases of Porro's operation with 115 deaths. While in the first 50 cases 29 died, in the last 50 only 9 died. The best results have been attained in Germany; the worst in England, America and Scotland Something has been done to remove Great Britain from this undesirable position, for Galabin (Obst. Trans., 1889, p. 57) has published a successful case of Porro's operation; and Hart (Brit. Med. Journ., 1889, vol. i., p. 183) has performed the first successful operation of the kind in Scotland.

20. The management of the third stage of labour.

Zinsstag (Arch. f. Gyn., Bd. xxxiv. S. 255) has made an elaborate investigation into the natural course of the third stage of labour. He observed it in 160 cases. In all of these precautions were taken to prevent any traction in the cord, and any alterations of the mechanism by friction or pressure on the uterus. The presenting part of the placenta was seized by forceps as soon as it appeared, so that it might be identified. In thirty, or 18.7 per cent. of the cases, hamorrhage took place to an extent that called for interference; and in 8.1 of these it came from the body of the uterus, and friction was requisite. Zinsstag's conclusions are the following: - (1). The expectant method has the disadvantage, as compared with Crede's method, that the patient loses much more blood, even a dangerous amount. (2). Credé's method does not lead to retention of membranes or to puerperal diseases. In support of proposition 2, the author brings forward 100 cases treated by Crede's method to compare with those managed on the expectant plan. The difference between the two sets, although such as to support his conclusion, is very slight. The occurrence of fever in the lying-in period could not be shown to depend upon the retention of membranes. The mechanism of placental expulsion described by Schultze (that is, folded with the feetal surface outwards and presenting) is not physiological, but is produced by intentional or unintentional pulling on the cord. When there is no traction on the cord the mechanism described by Matthews Duncan (folded with the uterine surface outwards, the edge presenting) is the most frequent, and that which corresponds to physiological requirements. That an effusion of blood between the placenta and the uterus (described by Ahlfeld as necessary for the separation of the placenta) is not essential, and is absent in about half the cases. The mechanism described by Duncan occurred in 72·3 per cent.; that of Schultze in 6·9 per cent.; and a mixed mechanism in 20.8 per cent. This mixed mode is the same as that described by Champneys (Obst. Trans., vol. xxix., 1887) as the normal: only that Champneys showed that the method of deliverance varied with the position of the placenta, a point of which Zinsstag has not taken account.

Dr. La Torre, of Rome (Nouv. Arch. d'Obst. et de Gyn., 1889, p. 152), seeks to revive the old practice of compressing the abdominal aorta to stop post-partum hæmorrhage. He gives a full account of the history and literature of the practice. It is, at least, a ready and effectual means in the worst cases.

21. Plugging the uterine cavity in atonic post-partum hæmorrhage. \mathbb{Q}^{2}

Chazan (Cent. für Gyn., 1888, S. 577) relates three cases of atonic post-partum hæmorrhage in which the bleeding was arrested by plugging the uterine cavity. In one case simply clean wool was used; in the other two wool soaked in a 1 in 50 solution of carbolic acid. All the patients recovered without bad symptoms. Born (Cent. für Gyn., 1889, S. 430) describes six cases of atonic post-partum hamorrhage treated in the Breslau clinic by plugging the uterus with iodoform gauze, as recommended by Dührssen ("Year Book," 1888, p. 256). He regards this treatment as the surest means we have of checking humorrhage of this kind. He believes it acts chiefly by the stimulating effect of the inserted gauze upon uterine contraction; for after the plugging severe after-pains were repeatedly observed, and in one case the gauze was expelled. But he thinks it is also effective by reason of the large surface which the gauze offers for blood coagulation. No injurious effects followed. Eckerlein (ibid., s. 449) relates four cases, which appear to have been of great severity. treated in Königsberg by this method, with unqualified success. A paper advocating this treatment by Dührssen, the originator of the practice, was read and discussed at the meeting of the German Gynæcological Society in Freiburg. He stated that it had now been used in fifty-seven cases, with one failure; and that it had been used with success to check hæmorrhage from the uterus in Cæsarean section and after rupture of the uterus. In the discussion the practice was strongly condemned by Olshausen, Veit, and Fehling; who, however, did not speak of having seen it tried. On the other hand, it was warmly supported by Dohrn, who had used it five times, and Kustner spoke of having "often" allowed it to be used. The latter author mentioned a case of post-partum hæmorrhage of a kind too rare to be passed over; fatal post-partum hæmorrhage from rupture of an aneurysm at the placental site.

22. The treatment of retention of membranes.

Dr. Eberhart (Zeitsch. für Geb. und Gyn., Band xvi., S. 292) writes on this subject. The dangers from retention of secundines are two: (1), hæmorrhage; (2), decomposition and consequent blood-poisoning. When a bit of placenta is retained, there is danger of hæmorrhage; but a piece of placenta may be retained for weeks without decomposition. As with a retained piece of placenta hæmorrhage is certain sooner or later to occur, such a retained piece should be removed without delay. When, on the other hand, a piece of membrane is retained, there is not necessarily any hæmorrhage; bleeding may occur, but this is from the imperfect uterine contraction which is probably the cause of the

retention of membrane. Such a piece of membrane only directly causes hæmorrhage when blood-clot becomes adherent to it, and forms a so-called "fibrinous polypus." But retained bits of membrane are very apt to putrefy, and the more apt the larger they are, and consequently the more readily they hang down into the vagina. The danger depends upon this: that, as Döderlein and Winter have shown, the vagina and cervix uteri generally contain microbes, but the body of the uterus is, as a rule, free from germs. Therefore a piece of membrane small enough to be contained entirely in the uterine body, as a rule will not decompose, but a piece large enough to hang down through the cervix into the vagina is almost certain to decom-The treatment follows from these theoretical considerations. First, prophylactic; right management of the third stage of labour. The placenta must not be expressed until the characteristic signs of its complete detachment are presentviz., flattening of the uterus from before backwards, a high position of the fundus uteri, further protrusion of the umbilical cord. In Halle, if no signs of detachment of the placenta are present, it is customary, to wait one and a half to two hours before attempting its removal. Out of 450 labours in which the third stage was managed in this way, in only three was artificial detachment of the placenta required. In the out-door practice of the midwives, during the same period, there were twenty-nine cases; this large number being due to hasty and unskilful attempts at expression. Retention of membranes was rare in the clinic, frequent in the practice of the midwives. When a bit of membrane has been retained, the best treatment is to put two fingers into the vagina, and remove what projects into the vagina, but not to attempt removal of membrane retained in utero; and to use douches before the first examination, during labour if the labour be prolonged, after delivery is over, and twice daily during the lying in, of 1 in 3,000 sublimate, and to give ergot. Washing out of the uterus is quite unnecessary. With this treatment no bad results from retention of membranes have ever been seen in the Halle clinic.

23. Puerperal fever.

The question of "self-infection" has been much discussed in Germany during the year. This term, as now understood, has not quite the same meaning as that conveyed by the apparently equivalent term "auto-genetic" introduced by Barnes. According to Barnes, there are cases of puerperal fever which result from processes within the patient herself, blood-changes, deficient excretion, etc., etc., quite independent of the entry of germs; and

these cases, as well as those resulting from the decomposition of retained membranes, clot, etc., he embraces under the term "autogenetic." But it is now becoming generally recognised that there is no such thing as fever dependent upon the causes first mentioned. but that the disease always depends upon the working of pathogenic organisms, and the controversy about "self-infection" is as to whether these organisms are always introduced to the patient during or after labour, or whether the infection may come from germs already in the vagina before labour. The point is not one of a purely theoretical kind; for if self-infection be a reality, then most careful antiseptic treatment of the vagina, before and after labour, is a necessity; while if the disease is always brought to the patient at or after delivery, then disinfection of the patient's surroundings, if complete, is all that is needed to insure her safety. In last year's "Year-Book" mention was made of the researches of Döderlein, Winter, Von Ott. and Czerniewski, all of whom agree in finding that the vagina always contains abundance of microorganisms. Steffeck (Zeits, f. Geb. und Gyn., Bd. xv., S. 395) has tested the efficiency of different modes of destroying the micro organisms present in the vagina. He finds it a most difficult thing to completely purify the vagina from living organisms. It cannot be done by simple douching; the vagina and cervix uteri must be also vigorously scrubbed, and to make the disinfection permanent, douches must be afterwards repeated at frequent short intervals. If Steffeck's results represent what is the rule, it is clear that vaginal disinfection cannot be carried out in practice. And in another communication (Centralld. f. Gyn., 1889, No. 14, S. 235), he admits that at present bacteriologists cannot demonstrate the presence of pathogenic germs in the vagina and cervix. Thorn (Sammlung klin. Vortrage, No. 327) thinks the term "self-infection" an unfortunate one, because the only difference between self-infected cases and others is that in the latter the external source of infection is evident, in the former we are in the dark about it. He proposes to distinguish the two modes of infection by the words "direct" and "indirect" infection.

Mermann (Centralbl. f. Gyn., 1889, No. 16, S. 269) objects to vaginal douches being administered by midwives, on the ground that they are too dangerous. It is possible for a carbolic acid injection, given with a dirty syringe and with dirty fingers, to be the actual means of infection. And if midwives are instructed to give these douches, there is danger that they may think that due observance of this measure absolves them from that minute care of their dress and person, especially the hands,

which is the really all-important thing. Mermann gives the results of 200 cases treated in the Mannheim Lying-In Hospital without any vaginal injections whatever. Of the 200, two died; one of these was admitted with a temperature above normal, and the mode of her infection before admission was traced. The other was supposed to be suffering from cancer of the stomach, and died with pyæmic symptoms three weeks after delivery. There was no post-mortem. There was slight fever in twenty-seven cases only; a percentage free from fever of 86.5. Mermann thinks his cases prove that the best results that have been attained by the use of internal antiseptics can also be attained without them; and he concludes by saying, "Away with vaginal injections and every kind of internal antiseptic from the practice of midwives."

Leopold (Arch. für Gyn., Band xxxv., S. 149) gives statistics of the Dresden Lying-in Institution. In the three years, 1886, 1887, 1888, about eighty per cent. of cases passed through the lying-in period without fever. He gives facts having a most important bearing on the question of self-infection, or so-called "auto-genetic" puerperal fever. In the three years, 1886, 1887, 1888, 248 women were delivered without any medical aid—never examined, touched, or syringed. Of these, ninety-eight per cent. went through the lying-in without any fever; five of the patients only had slight febrile symptoms.

Since 1885 the midwives in Saxony have been officially instructed not to use vaginal injections, either during delivery or the lying-in. They are told to irrigate the external genitals only with half a litre of a 2-per-cent. carbolic solution, twice daily during the first five days of the lying-in, and oftener should the lochia be offensive. The most thorough disinfection of the midwives themselves is the point upon which the greatest stress

is laid.

24. Microbes and puerperal fever.

Dr. E. Bumm (Arch. für Gyn., Band xxxiv., s. 325) gives a critical résumé of the most recent contributions to the elucidation of the cause of puerperal fever. It would serve no practical purpose to quote his views upon questions which he admits to be still unsettled; but it may be useful to mention the points which, in his opinion, are beyond controversy. Puerperal fever is a "wound-fever;" wound-fever is wound-poisoning. The greatest stride recently made in our knowledge of it is the differentiation between septic infection and putrid intoxication, or sapræmia. Although these two forms are often mixed, yet either may exist uncomplicated. Septic infection is produced in produced to the control of the c

the same strepto-coccus as causes the like disease in wounds of a non puerperal kind. The distinction between this strepto-coccus and the erysipelas coccus Bumm holds to be not yet fully established. The idea of self-infection, or "auto-genetic" fever as it is sometimes called in England, dates from a time at which nothing was known of micro-organisms, and their part in the processes of putrefaction and fermentation, and it was therefore conceivable that decomposition of animal matter might take place spontaneously. Cases of so-called self-infection are merely cases in which the germs, as is often the case in hospitals, form part of the dust floating in the air, and so the patient may get infected without the contact of hands or instruments. A really auto-genetic puerperal fever is impossible.

25. The value of antiseptic douches in the lying-in period.

Dr. Poten (Arch. für Gyn., Band xxxiv., s. 357) relates the results attained in the Hanover Lying-in Institution, which is worked by midwives. He rightly points out that the death-rate is not the only or sufficient test of the working of a lying-in hospital. The amount of febrile illness occurring is a measure of the efficiency of the antiseptic rules. In a well-managed lying-in hospital, Dr. Poten considers that from sixty to eighty per cent. of cases ought to be quite without fever. Taking the report of a hospital in preantiseptic times, he finds that with a mortality of between four and five per cent, the number of cases free from fever was only about 20 per cent. In the Hanover institution from 1883 to the end of 1887 the number of cases without fever was from fifty-seven to sixty-nine per cent. In the beginning of 1888 antiseptic douches during the lying-in period were added to the other antiseptic precautions, and the proportion of lying in cases free from fever rose to 78 per cent. He does not regard it as proved that the douches were the sole cause of this improvement, but he is not able to point out any other cause for the improved results.

26. The practice of antiseptic midwifery.

Cullingworth (Brit. Med. Journal, 1888, p. 743) presents concisely much of the evidence which experience has afforded of the safety from puerperal fever insured by the use of antiseptics. He recommends the accoucheur to carry with him powders composed of corrosive sublimate ten grains, tartaric acid fifty grains, and a little cochineal. The tartaric acid prevents precipitation by hard water. The cochineal is to prevent mistakes. One of these powders dissolved in a pint of water forms a 1 in 1,000 solution.

27. The curette in puerperal fever.

Charpentier (Nouvelles Archives d'Obst. et de Gyn., 1888, p. 490) relates a striking case of fever beginning on the fourth day following delivery, in which on the fifth day washing out the uterus with Van Swieten's solution of double strength, then scraping out the uterus with the curette, and scraping away also of sloughs from the vagina and vulva, then a renewed washing out, and finally plugging of the vagina with iodoform gauze, were followed by such rapid improvement as to amount to a "veritable transformation." On the twelfth day fever reappeared, and pleuritic effusion was discovered. The patient ultimately recovered, the effusion being absorbed. In the discussion which followed the reading of this case, Dr. Doléris, energetically advocated the early use of the curette, followed by antiseptic injections, as the best treatment in septic metritis. The subject has been also debated by the Obstetrical Society of Boston (Boston Med. and Surg. Journal, 1889, p. 9). Dr. O. W. Doe, whose paper opened the discussion, said that this treatment had been carried out in Braun's clinic at Vienna in nearly 500 cases, with only two deaths, and these cases brought into the hospital after the disease had developed, and other treatment had been practised. The indications for the curette were hypogastric tenderness with pyrexia; but it should never be used when parametritis or salpingitis were Half a tumblerful of decomposing matter was often removed with the blunt curette. After curetting, an iodoform bougie is put into the uterus, and the vagina stuffed with iodoform gauze. Charlier (Arch. de Toc., 1889, p. 332), basing his conclusion on twenty-six cases in the practice of Doléris, thinks that disease of the uterine appendages, and even peritonitis, is not a contra-indication.

28. Laparotomy in peritonitis.

The treatment of puerperal peritonitis by opening the abdomen has not yet, at least as applied to early cases, yielded satisfactory results. Dr. Opie (Baltimore) mentions a case in which the abdomen was opened on the fourth day, and some serum let out; but death followed ten or twelve hours afterwards (Amer. Journal of Obst., 1888, p. 1078).

29. Puerperal suppuration of the symphysis pubis. Dr. Dührssen (Arch. für Gyn., Band xxxv., S. 89) analyses thirty-three cases of this disease. He comes to the following conclusions:—Except in pyæmic suppuration of the symphysis (in which cases the prognosis does not depend upon the condition of the symphysis), the prognosis simply and solely depends upon the treatment. If the pus be not let out, death follows in 70

per cent. of cases. If the matter is let out, either by incision or by spontaneous opening (which may not occur till too late), recovery is the rule, followed by bony union of the symphysis. The causes of suppuration of the symphysis are pyrmia, tubercular disease, which is very rare, and simple inflammation, not pyrmic, generally arising by extension of suppuration from a wound in the anterior vaginal wall. Rupture of the symphysis pubis during labour is generally followed by fever, and such fever not lasting longer than a week does not indicate suppuration; but fever lasting longer than this, and attended with pain and swelling about the symphysis, points to suppuration. Suppuration of a symphysis pubis which has not been ruptured may easily be overlooked; and therefore in fever in child-bed arising without obvious cause, the pelvic symphyses should be examined. If there be reason to think suppuration is present, an incision should be made early in order to avoid burrowing.

30. The treatment and prognosis of hernia of the nubilical cord.

Lindfors (Cent. für Gyn., 1889, No. 28, S. 482), who has in a former paper, published in 1883, collected thirty-two cases of hernia of the umbilical cord, now adds to them thirteen more, published since that date. Three were treated by expectancy, two of them ending fatally. Ten were treated by operation, and seven of them cured. This, the author says, is most gratifying when one remembers how unanimous text-books are in stating that the prognosis is unfavourable.

31. Artificial suckling.

Budin (Brit. Med. Journ., 1888, p. 947) has devised a breastpump when any reason prevents the child from taking the breast. It consists of a glass reservoir which fits over the nipple. To this are attached two tubes. One is inserted into the highest part of the reservoir, and by it the mother can herself exhaust the reservoir and so draw the milk into it. The other is inserted into the lowest part of the reservoir, so that by it the child can draw the milk into its mouth.

32. Kehrer's operation for depressed nipple.

Herman (Lancet, 1889, vol. ii., p. 12) describes a case in which the patient had been in her first pregnancy unable to suckle with one breast, owing to the nipple being so depressed in a pit that the child could not draw it out. In the second pregnancy all the usual means for pulling out the nipple failed, and therefore an operation, first proposed by Kehrer, was performed. Two crescentic patches of skin were removed, and the opposed borders of each cres ent united by suture, so that by pulling on the borders of the

pit in which the nipple lay sunk it might be elevated. The result was completely successful, the patient being made able to suckle with both breasts.

33. Intermittent fever and suckling.

Dr. Jules Rouvier (Arch. de Toc., 1889, p. 353) describes, from his experience at Beyrout, the effects of ague upon children at the breast. If a suckling mother is attacked by malaria, this produces changes in the milk which cause gastric troubles in the child. If the mother, after having contracted intermittent fever, remove into a non-malarious district, the child, unless it have previously acquired intermittent fever, will not show symptoms of it; but unless the mother be treated, her milk will continue to be indigestible. The best treatment is to replace the mother by a Giving quinine to the mother does not make the wet-nurse. milk healthy. When both mother and child have acquired intermittent fever, the attacks are more frequent and more serious in the child; and they often depart in their type from the classical, being combined with convulsions, gastro-enteritis, etc. The digestive troubles caused by the milk of a mother suffering from ague indirectly make the cure of ague in the infant difficult. Therefore in such a case the mother should not suckle. It is no use to try and give quinine through the milk of the wet-nurse; it only spoils the milk, and causes it to be rejected. The best way is to give quinquina hypodermically. Misrachi of Salonica (ibid., p. 472) finds satisfactory results from giving quinine to the child through the medium of the milk.

34. Hæmorrhage from the umbiliens.

Dr. W. R. Dakin (Lancet, 1889, vol. i., p. 626) gives the following instructions for arresting hæmorrhage from the umbilicus in infants :- "The operator stands on the child's left. It will be crying, and its abdominal walls will be tense. In the intervals of taking breath they are lax; and, at this moment, including between the finger and thumb of the left hand about an inch of the abdominal wall, exactly at the level of the lower edge of the umbilicus, the operator on tightly pinching this up will feel the cord of the umbilical (hypogastric) arteries, which will slip farther within his grasp. This will always happen if he is careful in choosing the level mentioned, as the vessels here are coming to the surface, and there is no difficulty in making the tips of the finger and thumb meet beneath them. If the attempt be made even a quarter of an inch nearer the pubes than this, the arteries will slip away from between the finger and thumb, as they are too deep to be included in the pinch. It is easy, now they have been secured, to pass a pin beneath them. There is no risk of wounding the intestines, as these are pushed down by his finger and thumb. The hamorrhage will cease directly the pin has been properly passed. If by any chance it does come from the vein, a figure of 8 ligature will check it. The main point is to make sure the artery is under run and not transfixed. The pin may be withdrawn in a few days."

Books on Midwifery published during 1889.

ENGLISH.

Tait, on Ectopic Pregnancy and Pelvic Hæmatocele. An exposition of the theories and practice of this eminent surgeon.

Barbour, The Anatomy of Labour, with atlas of plates. A work which puts before the reader the progress which has been made in the knowledge of the parturient process by means of frozen sections; the greatest work on the subject since William Hunter's.

Leishman's Midwifery has reached its 4th edition, and Playfair's Science and Practice of Midwifery, its 7th edition. Hewer, on Antiseptics. A little book useful for nurses.

Spiegelberg's Text-book of Midwifery, translated by Dr. J. B. Hurry. New Sydenham Society. The translation of this great work is now complete.

The American System of Obstetrics, by various authors, edited by Dr. Hirst. This work is now complete. Good on the whole, but the knowledge of some of the writers seems too much limited

to what has been done in America.

Rentoul, on the Causes and Treatment of Abortion.

Strahan, on Extra-uterine Pregnancy.

The above two works are prize essays.

Cheadle, on Artificial Feeding. A useful practical guide.

FRENCH.

Treub, Recherches sur le Bassin Cyphotique. An elaborate study of the mechanics of the kyphotic pelvis.

Bar, Embryotomie Cephalique. An exhaustive work on the

methods of craniotomy.

The three following works are reprints of collected essays by their distinguished authors:—

Auvard, Travaux Obstétriques.

Budin, Leçons de Clinique Obstétricale,

Pajot, Travaux d'Obstétrique et de Gynécologie.

GERMAN.

Müller's Handbuch der Geburtshülfe. This great system, by

various authors, is now complete. The most exhaustive systematic work on the subject that we have.

Winckel, Lehrbuch der Geburtshülfe. A good text-book for the German student.

Preuschen, Die Allantois des Menschen. Very interesting to the embryologist.

Schultze, Lehrbuch der Hebammenkunst. A popular book, intended for midwives.

DISEASES OF THE SKIN.

BY MALCOLM MORRIS, F.R.C.S.E.,

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THERE has been much activity in this department Juring 1889. The principal event was the International Congress on Dermatology and Syphilography, held in Paris during the month of August. Many questions of interest were discussed, chief among which was that on the "Constitution of the Lichen Group." The discussions were mainly on the pathology; very little was said on treatment, except of ringworm and syphilis. The literature of the year has been principally on lichen planus, especially in its relations to lichen ruber, on pityriasis rubra pilaris, dermatitis herpetiformis, cutaneous sarcomata, trichophyton and its disease, and leprosy.

Drs. Taylor (New York Medical Journal, Jan. 5, 1889) and Robinson (Journ. Cut. and Genito-Urinary Diseases, Nos. 76—78), of New York, have published important papers on the relation of lichen planus to lichen ruber as met with in America. Their conviction is that they are essentially distinct diseases; that lichen ruber is of the nature of a hyperkeratosis, while lichen planus is inflammatory.

An exhaustive Memoir on pityriasis rubra pilaris (Devergie), was published by Besnier, who believes that the disease is totally distinct from lichen ruber acuminatus of Kaposi, which, however, the Vienna dermatologist denies.

Dr. Funk, of Warsaw, is the author of a long article on cutaneous sarcomata. He describes in detail the several clinical and pathological forms of cutaneous sarcomata, including mycosis fungoides of Alibert, and quotes Köbner's case as proof of the curability of cutaneous sarcomata by injections of Fowler's solution. Unna has written an important article on lichen planus, and Brocq and Unna have also written on Duhring's disease, or dermatitis herpetiformis.

In the department of bacteriology observations on trichophyton

have been published by Drs. Thin (Brit. Med. Journ., Feb. 23, 1889) and H. Leslie Roberts (Brit. Journ. of Derm., No. 11, 1889). Quite recently the class of animal parasites called Sporozoa have been studied by M. Darier in their relation to epitheliomata and some follicular diseases accompanied by epithelial new growth.

Two new text-books have been published — one by Edmund Lesser on "Diseases of the Skin and Genital Organs" for students and practitioners; the other by Van Harlingen, of Philadelphia, as a "Handbook of the Diagnosis and Treatment of Skin Diseases."

1. Ergot in erysipelas.

Dr. F. Nesżerovsky (Novosti Terapii, 1888, Nov., p. 420) describes two cases of erysipelas of the face and scalp in which painting every other day with a mixture of extract secale carnutine and glycerine was successful. A healthy adjoining zone of about one finger's breadth was also painted with the mixture each time. During the intervals the parts were kept covered with a thin layer of a 5-per-cent, carbolised cotton-wool. In both patients the first application was followed by a marked alleviation of heat and pain, while the process ceased to spread, the temperature returning to the normal—in one case on the seventh, in the other on the sixth, day.

2. Treatment of erysipelas.

The treatment of crysipelas with absolute alcohol is recommended by Dr. Behrend, of Sargan, who was induced to make a trial with the remedy in consequence of a note which appeared in the Therap. Monatshefte two years ago to the effect that alcohol is an absolute poison for the crysipelas cocci of Fehleisen. It was found sufficient to wash the parts affected, including about an inch of the healthy surroundings, thoroughly with 90 per cent. alcohol three times daily. The progress of the disease was regularly arrested at once, and recovery followed in about three to five days. A large series of cases treated in this manner at the House of Correction at Sargan appears fully to justify this convenient and rational method of treatment. (See Berl. klin, Wochens., No. 10, 1889.)

Dr. Ebstein, of Breslau, on the other hand, advocates inunction with 5-per-cent. carbolic vaseline, with which twentyseven cases were successfully treated in Professor Rosenbach's clinique. The ointment is to be well rubbed into the skin, to some extent beyond the zone of inflammation, and may afterwards be removed with soap and water. In two cases thus treated carbolic acid was detected in the urine. No untoward effects, however, were observed in consequence. (Deutsche Med.

Woch., No. 6, 1889.)

Another method of treating the same affection is by superficial incisions of the skin, and dressing with sublimate bandages, as practised by Kraske and Riedel. (Deutsche Med. Woch., No. 11, 1889.)

Dr. Lauenstein, of Hamburg, has lately published his results obtained from this mode of treatment in five very severe cases, in one of which he was himself the patient. The parts attacked are encircled by a cordon of slight scarifications, which are to form a complete and uninterrupted ring all round. It is expedient not merely to draw one single line, but rather to make a network of scratches, as at some places the incision (probably owing to some inaccuracy in the execution) is occasionally limble to be overstepped. In one case, which was of the colour of a purpura, the erysipelas was rapidly spreading from the face and neck downwards towards the abdomen. Lauenstein considera that but for these measures life would undoubtedly have been lost; and in the others the beneficial effect followed almost immediately. The originator of the method, Kraske, has also published some convincing histories of cases treated in this way, which appears serviceable even in the severest attacks.

The pathology and treatment of eczema in childhood.

Schiff states (Wien. Med. Wochenschrift, 1889, Nos. 12-15) that out of 1,017 cases of diseases of the skin in the Children's Hospital in Vienna 449 were eczema; and out of these, 136 occurred during the first year of life, 143 during the second; while of children in their third year there were only 63; of ten years of age, 5; and of thirteen years, only 1.

The prevalence of eczema in the first and second years of life may be accounted for by the thinness of the epidermis; the superficial position of the papillary body and its network of bloodvessels; the more turgid condition of the infantile skin as compared with that of adults; the habitual hypersecretion of the

glands of the skin.

Among external causes of infantile eczema are the accumulation and decomposition of the cutaneous secretion, and the too frequent washing with water, and friction in drying the skin. Schiff treats the impetiginous form of eczema of the scalp and face by smearing the parts with oil at night, and then placing an oilcloth cap on the head. In the morning the oil and softened scals are gently removed with soap and water. Morning and evening this treatment is repeated till all the scabs are removed, and the scalp presents a smooth, clean, red aspect. Schiff's after-treatment consists in applying Lassar's vaseline paste, composed of zinc oxide, starch, ää 250; vaseline, 500; salicylic acid, 10.
Frequently he omits the salicylic acid and zinc oxide. The starch and vaseline alone are often sufficient to effect a cure when the scabs are removed.

Of all forms of infantile eczema intertrigo is the commonest. The indications for treatment are to protect the parts from further irritation, to keep them absolutely dry, and to avoid washing them with water. Starch is to be sprinkled abundantly on the opposing surfaces, which should be separated by a layer of cottonwool. If the surfaces are excoriated, chalk linseed-oil liniment is recommended, or the use of fomentations of nitrate of silver,

1:500, as suggested by Boeck, of Christiania.

The intertrigo of wasted infants due to diarrhea needs the most stringent prophylactic and therapeutic measures. The affected parts should be cleansed every half-hour with chalk linseed-oil, and then sprinkled with starch. In very severe cases painting the genitals, perineum, and inner surfaces of thighs with zinc glycerine jelly containing fat will be found very serviceable. The composition of the jelly is:—Zinc oxide, lard, gelatine, āā 10·0; glycerine, 70·0. It must be melted by placing the pot which contains it in hot water, and painted on the parts as soon as it is sufficiently cooled to be borne by the patient. Before it is fully dried, cotton-wool is dabbed on, and the cotton-wool surface then soaked in oil. An equally serviceable and simpler method is to apply Unna's zinc plaster mull, making a hole for the penis or vulva, and anus. Sometimes it is advisable to place a sponge over the penis or vulva, which should be frequently renewed. In cases of eczema of eyelids, nostrils, corners of mouth, external auditory canal, external ears, margin of anus, the first thing to be done is to check the excessive secretion from the mucous membrane which causes this kind of eczema. The scabs should be softened and removed, and the surfaces protected by zinc plaster mull. For eczema of the nostrils and auditory canal, benefit is derived from inserting little tubes of zinc salve mull smeared upon both

In eczema squamosum Schiff considers tar to be the best remedy. It must be used with caution, and only a small surface painted at one time. If there are any moist or excoriated parts associated with the eczema squamosum, the tar must not be applied to them.

4. Treatment of baldness.

Dr. E. Besnier (Journ. de Mêd. de Paris) states that the falling out of the hair may be checked, and a new growth started by the following treatment. The hair should be cut short, and a mild

sinapism on rubefacient applied to the scalp; then every five days the following lotion is to be applied:—

Acidi acetici āā q.s. M.

This preparation should be used cautiously, as it is an irritant, and stimulates the hair powerfully. In connection with the above the following pomade should be used:—

Acidi salicylici ... gr. xv.
Sulphuris precipitatis ... 3jss.
Vaselini ... 3v.

This pomade should be applied fresh every morning, the scalp having been previously washed. Fatty substances retard the growth of the hair, and should not be used.

5. Treatment of scabies.

Dr Hardy's "quick cure" at the St. Louis Hospital consists in rubbing the patient all over with soft soap for half an hour, and keeping him in a hot bath for the same length of time, after which the skin is covered with an ointment having the following composition:—Sulphur 50 parts, bicarbonate of potash 25 parts, lard 300 parts. In Germany, Wilkinson's modified ointment is much used, consisting of sulph. venal., ol. fagi, āā ʒvj; sapo. viridis, adeps, āā ʒi; creta, ʒiv. Balsam of Peru and naphthol have both been proved to be excellent parasiticides, and Dr. White of Boston combines them with sulphur in the following proportions:—Sulphur flor., ʒii; β-naphthol, ʒj; balsam of Peru, vaseline, āā ʒj. The third part of this is to be rubbed over the skin, and a bath taken in the morning. Subsequent itching is not a sign of the continued activity of the original affection, and the resulting eczema must not be treated as though the parasites were still present.

Schwimmer (Wien. Med. Wochen., No. 5, p. 179, 1889) states that he has obtained excellent results in the treatment of the affection by the use of 10 per cent. of oxynaphthoic acid combined with a fat in the form of an ointment. Further notice will be taken of

this drug under section 13 in this paper.

6. Treatment of psoriasis by iodide of potassium.

Barduzzi (Gazzetta d. Ospedali, 17, 1889) has found that his experience of the effect of iodide of potassium in cases of psoriasis, tallied with that of Greve, Boeck, and Hasland. In three diffuse universal cases of very inveterate character, which had been treated with transient success by all the usual remedies, he obtained results from iodide of potassium which he had never

hoped to get. In none of the cases was the amount of the drug larger than 7 grammes (105 grains) daily. McCall Anderson, of Glasgow, likewise reports favourably of gradually increasing doses of the iodide of potassium in this disease.

 Treatment of ringworm.
 Butte (Report of Intern. Cong. Derm., Paris, Aug., 1889, Brit.
 Journ. of Dermatology, No. 12, 1889) believes that parasiticides employed alone do not seem able to give good results. He has obtained his best results from frictions with a pomade composed of ninety grammes of lanolin and ten grammes of protochloride of iodine without epilation.

Quinquaud (ibid.) recognises the good effects of this treatment, but he prefers a more complicated one, in which the head is first shaved and washed with soap and water, then rubbed with a solution of the biniodide and bichloride of mercury; the affected regions are epilated, and rubbed with sand-paper in order to remove the epidermis. He then repeats the friction, and applies finally a plaster made with the same mixed solutions of mercurials. The dressing is repeated every eight, twelve, or fifteen days.

Besnier rejects those parasiticides which produce dermatitis, visible cicatrices, and alopecia. He orders the scalp to be shaven, epilates around the trichophytic zones, smears a little boracic vaseline over the head at night, and has the parts washed

the next morning with soap and water.

Vidal (ibid.) thinks that the cure of tinea tonsurans depends on the depth to which the trichophyton has penetrated. an aëriobic fungus, and in order to destroy it, it is necessary to protect it from exposure to air. He treats the disease in the following manner: The hair having been cut as close as possible he has the head rubbed with essence of turpentine, and the affected parts painted with tincture of iodine. The head is then smeared over with vaseline, either pure or containing boracic acid, or iodine (1 per cent.), and covered with a caoutchouc cap or a guttapercha leaf, which a bandage with running strings (serre-tête à coulisses) keeps hermetically applied to the scalp. The dressing is renewed morning and night, and the parts are washed with soap and water, and wiped carefully. If the applications of the iodine do not provoke inflammation, it may be applied daily, but otherwise every three or four days. For some time past he has endeavoured to replace the tincture of iodine by small pieces of Vigo's plaster with mercury.

This treatment has the advantages of the old-fashioned calotte, without its inconveniences, and is not accompanied by pain. It removes the debris of altered hair as they come to the surface of the skin. When the plaster is removed, the scalp is anointed with iodised vaseline, and then covered with guttapercha. The results obtained are encouraging.

Hallopeau (ibid.) states that he has obtained 50 per cent. of cures by Lailler's treatment with iodised vaseline (1 per cent.)

applied every day to the shaven scalp.

Neumann and Hans von Hebra (ibid.) affirm that timea tonsurans is rarer in Vienna than in Paris. A ten per cent. pyrogallol

ointment gave excellent results.

Dr. Harrison (Brit. Med. Journ., March 2, 1889) combines a caustic alkali with the parasiticide as an ointment, in order to soften the hair and so gain better access for the parasiticide to the spores of the trichophyton. His formula is—potassec caustice, grs. ix; acidi carbolici, grs. xxiv; lanolini, al cocose, aā §ss. He does not find it necessary to shave the hair, and thinks there is an advantage in leaving it about a quarter of an inch long. He has had successful results, and generally obtains a cure in from one to three months.

8. Treatment of ringworm of the nails.

Dr. H. Fournier (Journ. des Mal. Cutanées et Syph., April, 1889) recommends the removal, either suddenly or by degrees, of the whole of the affected parts, either by scraping, scratching, evulsion, or by the action of various topical remedies, such as creasote, acetic acid, benzine, corrosive sublimate (2 per cent. in alcohol or chloroform), an ointment of turpeth-mineral, mercurial plaster, tincture of iodine, resorcin. These two last, combined with the previous maceration of the nail by means of indiarubber coverings, are those which have given the author the best results. But, as he rightly remarks, the parasitic lesions of the nails, and the trichophytic onychomycosis in particular, are of long duration, and difficult to cure.

9. Treatment of lupus.

Dr. Schütz, Frankfort (Münch. Med. Wochens., No. 46, 1888) has found the formation of healthy cicatricial tissue after the removal of the lupous nests to be greatly facilitated by applying a compressive collodium dressing. He very justly points out that it is requisite not only to remove all morbid portions of the skin, but that the cure cannot be considered as complete unless the scars are reduced to as small a volume as possible, and are perfectly soft and pliable. In order to obtain satisfactory formation of cicatricial tissue, Lassar has advised repeated ablation of the epithelial edges of the healing wounds, whilst Doutrelepont recommends dressing with compresses moistened with a solution of corrosive sublimate, and Gerhardt has found refrigeration a useful

means of retarding and invigorating the formation of the scars. Schütz recommends the following as a beneficial treatment:-After removing all diseased portions of the skin by means of the sharp spoon, actual cautery, and pyrogallic acid or chloride of zinc, for the first few days compresses of perchloride of mercury, in the ordinary strength, are applied until the slough becomes loosened and an edge of epithelial tissue appears on the granulation surface. Then the wound is covered with mercurio-carbolised guttapercha plaster muslin, and the whole thickly coated with collodium, care being taken to allow each layer of collodium to dry thoroughly before a fresh one is applied. This dressing is removed after six to twenty-four hours, according to the copiousness of the discharge, and a new one applied as quickly as possible to avoid retraction of the tissues during the changing, Dr. Schütz claims for this dressing the advantages that in consequence of the compression it exerts, the granulations are prevented from becoming too luxuriant, undesirable retraction of cicatricial tissue is avoided, and the formation of the epithelial covering is hastened by the warmth and moisture produced under the guttapercha plaster.

Unna (Monatsh. f. Prakt. Dermatol., No. 11, 1889) asserts that not even actual excision of the affected area with the addition of a plastic operation is so good as the local treatment by means of drugs. It is frequently advantageous to have recourse to some small surgical procedure, but in any case the destruction which is effected by scraping, cutting, pricking, burning and cautery, should never give rise to more marked scars than those which spontaneous cure produces on those which are left when the case is cured, as they all can be, by purely dermatotherapeutics. The first procedure consists, in the case of larger patches of disease, in the mechanical removal, in the first place,

of the bulk of the disease under an anæsthetic.

The after-treatment has for its aim to make up the loss of tissue, to destroy completely all the surrounding lupus foci, and to produce scars which are satisfactory from an æsthetic point of view. These latter conditions are most completely fulfilled by the use of plaster mulls containing salicylic acid and creasote (or

guaiacol).

For the removal of the lupus tissue in bulk Unna prefers the Paquelin cautery to Volkmann's spoon, since it avoids the possibility of fresh inoculations, allows the operator to see his work, and produces a useful contraction of collagenous tissue, which tends to choke the underlying lupus tubercles. Following this, and whilst the patient is still under the influence of the

anæsthetic, the whole of the burnt surface is rubbed with a strong antituberculous preparation:—Acidi carbolici, grs. 65; sublimati, grs. 18; sp. æther., 3i. A plaster containing salicylic acid 20·0, creasote 40·0 per meter; or salicylic acid 20·0, guaiacol 10·0 per meter, is laid on, and covered with zinc glycerine gelatine, which is then dabbed over with cotton

wadding.

When the patient recovers from the effects of the anæsthetic, the anodyne (creasote or guaiacol) will have had time to overwhelm the pain of the salicylic acid and the sublimate. After twenty-four hours the dressing is removed, and the surface cleansed. A 5 per cent solution of cocaine is then painted on, and after five minutes all suspicious spots are rubbed or bored with a 10 per cent. sublimate pencil; cocaine is then again applied, and the place re-dressed with plaster. A quarter of an hour afterwards all pain disappears, and does not recur till the next dressing. If the wounds are tending to close too quickly, a sublimate pencil should be freely used; but the wounds, even of patches the size of the palm, ought to be healed over in two or three weeks. Subsequent redness is removed by painting every night with a 20 per cent. ichthyol solution. If chloroform is contra-indicated, begin with a strong plaster—salicylic acid 400, guaiacol 200 per meter—and use the sublimate pencil freely.

If the plaster mull is not obtainable, Unna uses an ointment composed of salicylic acid 20.0, creasote fagi 40.0, ceratum 40.0, spread upon lint, and covered with guttapercha paper. He finds that the penetration and anæsthesia are not equal to those obtained by the plaster; it has, however, the advantage of cheap-

ness where large surfaces are involved.

Wherever the granulations are produced with difficulty (as over bony prominences), iodoform gauze is applied to encourage their growth. If the lupus nodules be embedded in old stringy scars, the application of the plasters should be preceded for a few days by the following salve—acid. lactic. 10-0, lanolin 90-0—covered by an impermeable dressing, in order to promote softening of the tissues.

Lupus of the mucous membrane of the mouth, nose, and eyes is best treated by the Paquelin cautery; lupus of the nose and lacrymal duct, and external auditory meatus, by the cautery and

tampons of the salicylic creasote salve,

In cases where energetic treatment is impossible, Unna recommends the salve under an impermeable covering by night, and the use of a 10 per cent sublimate salve-stick by day, or painting with water glass varnish (liq. kali salicic. 800, of lini 20.0); or, if the lupus is much inflamed, painting in the daytime with ichthyol slightly diluted with water, and at night

simple rubbing with the salve.

Small tubercles such as are apt to recur at the edges of scars are most easily dealt with by the galvano-cautery at a low temperature, or by boring in a sharpened match-stick, the end of which is first twisted round with cotton-wool, and dipped in the carbolic and sublimate mixture spirit solution (the skin having been first broken through by a knife-point), and allowing it to remain there for from a quarter to half an hour. which are thus left are filled up with the same caustic lotion.

10. Treatment of acue vulgaris.
Dr. Hermann Isaac (Berl. Klin. Woch., No. 3, 1889) gives a sketch of the treatment of acne as practised in Lassar's clinic. Various remedies have been recommended; thus, by Lewin. stimulants in large quantities, based on the argument that the disturbance in question is caused by a diminution of vital energy, while Rosenthal advocates scarification and massage. The rationale of the treatment consists chiefly in producing sufficiently intense peeling of the skin to remove all obstructions from the sebaceous glands, and eventually also to reduce excessive vascularisation of the skin. This is most effectually achieved by the application of naphthol or resorcin paste. The formula reads:-Naphthol, 1 part; sulphur præcip., 5 parts; saponis viridis, and vaseline, āā 2 parts. This ointment is smeared over the affected parts, and allowed to remain on for 30 to 60 minutes, and to be repeated daily until the skin peels thoroughly. This may be followed by the application of a 2 per cent. salicylic acid paste, or some dusting powder.

Another formula recommended in obstinate cases is puly conalb., 5 parts; β-naphthol, camphor, vaseline flav., 22 10 saponis viridis, 15 parts; sulphur pracip., 50 parts. This parts. tion should not be applied for longer than a quarter of = Resorcin paste was used in about 50 cases with most results. It is also applied as a soft paste in the following tions :- Resorcin, zinc. oxydi amyli, aa 5 parts ; parts. Isaac has found it advisable, however a a less concentrated (10 per cent.) ointment if necessary. In addition the medicinal especially as a prophylactic measure. It mind that acne is often merely a symptom was a second internal organs, as it is more than the terms of the second which become inflamed by the bromine and iodine also serve for the

bodies from the organism. In this way the effect of cheese, beer, and coffee on the skin is satisfactorily explained, and the necessity of avoiding such irritants sufficiently proved.

11. Leprosy.
Two questions relating to this subject have received special attention-(1), Is leprosy contagious ? (2), Is the disease spreading in the British dominions? Neither of these questions has been answered conclusively. According to Beaven Rake (Brit. been answered conclusively. Med. Journ., 1888, ii., p. 215) the attempts at cultivating the lepra bacillus in artificial soils are so far an absolute failure. The inoculation of different animals with the bacillus has never reproduced the disease.

The question of its contagiousness was fully discussed in the French Academy of Medicine in 1889, and the general opinion

was that it could not be answered at present.

As to the spreading of leprosy in the British territories, the difficulties in the way of obtaining reliable statistics make the solution of this question at present impossible.

12. On the surgical treatment of leprosy.

Mitra and Beaven Rake record the results of their attempts at nerve-stretching. Mitra affirms that although evident improvement followed in a few cases, the majority of cases did not

permanently benefit by the operation.

Beaven Rake (Brit. Med. Journ., 1888, ii., p. 1,373) tabulates He performed 100 operations of nerve-stretching. his results. twelve of which were in cases of lepra tuberosa, sixty-four in lepra anæsthesia, and twenty-four in which the two varieties occurred simultaneously. The results of the operations were as follows:-Improvement, 47; no improvement, 49; doubtful, 4.

13. Oxynaphthoic acid.

Schwimmer (Wien. Med. Wochen., Nos. 3, 4, 5, 8, 9, 1889) speaks favourably of this drug in relation to scabies and prurigo. and also as a germicide of some power. The sodium oxynaphthoic acid is formed by heating sodium naphthol with CO. It holds the same relation to a naphthol as salicylic acid does to phenol. It is a white odourless powder with pungent taste. When inhaled, it causes sneezing. It is almost insoluble in pure water or in acidulated water, but dissolves in warm glycerine and in ethereal oils. The trials of this drug are favourable to its employment. It is alleged to be five times as effective as salicylic neid.

The preparation was first formed by Rud. Schmidt, of Dresden, and its physiological effects first pointed out by Ellenberger and Hofmeister in the Deut. Zeitschrift für Thiermedizin, B. xiii., 1887. 14. Menthol in pruritic affections.

Menthol is recommended by Saalfeld, of Berlin (Deutsche Med. Wochenschrift, No. 46, 1888), as very beneficial in cases of pruritus of various kinds. He prescribes it either as a wash or as a salve, the formulæ being—(I.) menthol 1.5 to 2.5 grammes (22 to 37 grains), spirit. vin. rect. 50.0 (\$\frac{3}{1}\] 5vi); and (II.) menthol 2.5 (37 grains), ol. olivarum 7.5 to 10 (\$\frac{3}{1}\] to 5iij), lanolin ad 50.0 (\$\frac{3}{1}\] 5vi). Both preparations have acted successfully in urticaria, pruritus, and pruritus senilis. A case of intolerable itching consecutive to otherwise successfully treated scabies was perfectly cured by the application of the following ointment:—Menthol 2.5 (37 grains); bals. Peruv. 5.0 (75 grains), ung. zn. benz., lanolin pur., \$\tilde{a}\$ ad 50.0 (\$\frac{3}{2}\] 5v). Menthol as a 10 to 15 per cent. ointment proved likewise very valuable in certain cases of chronic eczema.

15. Chloride of hydroxylamin.

This substance, which has the formula NH₂OHHCl (hydroxylammonium chloride), was recommended by Binz for trial in the treatment of skin diseases, on account of its resemblance to pyrogallic acid and chrysarobin in its active reducing powers. Eichoff (Monatshefte f. Prakt. Dermatologie, i., 1889) treated five cases of lupus vulgaris, five cases of ringworm of the scalp, and one case of parasitic sycosis of the face with the following solution:—Hydroxylamin hydrochlor., 1; sp. vini, glycerini, āā 500. The affected parts were first well washed with soft soap, and the solution was painted in three to five times daily.

In one bad case of lupus hypertrophicus of the face, the hypertrophy disappeared in eight days, and the healing of the sores quickly followed. The whole affected area was covered with a clear white scar within four weeks. Eichoff did not, however, suppose that the case was finally healed in so short a time.

Fabry (Vierteljahrschrift f. Derm. u. Syph., Heft 2, 1889) has made a long series of experiments on the action of hydroxylaminum murialicum on psoriasis. On account of the very poisonous nature of the substance (narcotic, paralysing the nerve-centres, in large doses causing convulsions and death [Binz]), no attempts were made to exhibit the drug internally. A spirit solution of 0.2 to 0.5 per cent. was painted on twice daily, or compresses wet with a 0.1 per cent. watery solution were kept continuously applied. Both solutions are neutralised before use by the addition of carbonate of lime. In action it has proved to be as powerful as chrysarobin or pyrogallol, and has the enormous advantage over these drugs in that it does not stain the skin or the linen. It must be administered with care on account of its poisonous properties. Patients present very varying degrees of tolerance of the

local action, some being unable to endure the pain which it causes, whilst others experience no unpleasant sensations. In case it causes any irritation recourse should be had at once to a dusting powder, or mild (zinc) salve, until the skin is fit for the renewed application of the hydroxylamin. With care the action of the drug is quite satisfactory. Eichoff tried it in twenty-four cases, in twenty-one synchronously with chrysarobin, pyrogallic acid, and arthrarobin. Like the two former, it cleared the skin in from four to six weeks, but did not prevent recurrences. Anthrarobin is much weaker than chrysarobin and pyrogallol, and fully as disagreeable.

16. New lanolin ointments.

According to Stern, of Mannheim (Therap. Monatshefte, No. 2, 1889), sapolanolin consists of a mixture of lanolin anhydricum 2½ parts, and sapo kalinus 2 parts. With the exception of salicylic acid, all the useful drugs, such as boric acid, tar, white precipitate, resorcin, etc., can be mixed with the above compound. In chronic cases of infiltrated eczema, in mycosis, as well as in such cases of seborrhæa as are covered copiously with thick masses of scabs, such an ointment can be used beneficially. For psoriasis capitis Dr. Stern has used the following with success:—

Hydr. præcip.				10.0
Sapon. kalin	 ••	••	•••	40.0
Lanolin, anhydr.	 •••	• • • •		50.0
Lanonn, annvar.	 			ยบบ

2. Lanolin wax paste (ung. adhæsiv.):—Stern recommends in cases of eczema of the head and face of children as a basis:—

Lanolin. anhydr.) Ol. oliv	•••	•••	•••	ā ā	40·0 20·0	
(In the summer, ol. oliv. benzoin.) M. f. pasta, usque ad refrigerand. agitate.						

Most drugs can be mixed with it. In the case of tar, the proportion of wax is slightly higher.

3. Fluid lanolin injection :- -

(1) Lanolin, anhydr.		 	 25-0
Ol. amygdal		 	 75-0
M. (injection basi	۶.		
(2) Zinci sulphatis		 	 0.2
Aquæ			 4.5
Lanolin, anhydr.		 	 20.0
Ol. amygd		 	 75-0
(3) Acid. salicyl			 0.52
Ol. amygd			 75.0
Landin enhydr			24.75

The injection is used with an ordinary syringe. The injection basis, kept five or ten minutes in the urethra, acts very mildly and soothes any irritation, and can be applied in the acute stage of the affection. After eight or ten days an antiseptic or astringent agent is added, and the treatment is then completed by a $1\frac{1}{2}$ per cent. watery solution of resorcin.

DISEASES OF THE EYE.

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The most important treatise on ophthalmic medicine and surgery that was published in the course of the year 1889 is the "Diseases of the Eye," by Mr. George A. Berry, of Edinburgh, which presents in a readable form and moderate compass the present state of ophthalmic knowledge. MM. Wecker and Landolt have completed their very elaborate treatise on Ophthalmic Medicine and Surgery in four volumes, in which the reader will find the latest exposition of the difficult subject of the Refraction of the Eye, by M. Landolt, and the results of the large experience of M. Wecker. The concluding part is occupied with the consideration of the diseases of the orbit and of the lacrymal apparatus. A useful work on Prisms has been written by Ernest E. Maddox, supplying a much-felt want. Lastly, Mr. Charles Higgins, of Guy's Hospital, has published a "Manual of Ophthalmic Practice" for the use of students and general practitioners.

1. The employment of massage in diseases of the

Dr. G. Pfalz, of Düsseldorf (Hirschberg's Centralblatt für die Augenheilk., 1889, p. 148), considers this method of treatment to be of great value in certain cases of an obstinate character. According to the special indications of the case, he uses the yellow or white mercurial precipitate, potassium iodide, atropine sulphate, eserine, or other substance in suspension in some fatty substance; this being introduced into the conjunctival sac, and the upper or lower lid stretched with the forefinger, he rubs the skin of the lid briskly in a radiating or circular direction with the fingers of the other hand, which may either be greased or covered with a little cotton-wool, remembering the course of the lymphatics and of the venous channels runs from the inner to the outer angle of the eye and down the check. The pressure exerted

must, of course, vary with the sensitiveness of the parts, and each infrication should not exceed two minutes in duration. He has found it serviceable in the cloudiness which persists after acute attacks of disease of the cornea, also in cases of chronic pustular disease with hypertrophy of the tissue, in spring catarrh and chronic conjunctivitis. It should be practised with care, or not at all, in cases of episcleritis and of iritis.

2. Reflex ophthalmic troubles of nasal origin.

Dr. A. Trousseau (Recueil d'Ophthalmologie, Mai, 1889, p. 310) points out that during the last few years attention has been drawn by various writers to the relations which exist between the diseases of the nose and certain affections, like whooping cough and asthma,

which have a strong nervous element in them.

Hack, for example, has shown that in some cases of these diseases there is considerable swelling of the anterior segment of the superior turbinal bone on one or on both sides of the nose, and occasionally the same condition is found in the middle tur-binal bone. It is not surprising that the eye should participate in such reflex irritation, and that it is really often implicated is shown by the observations of Grüning, Lennox Brown, and Bittman. The last-named observer has recorded cases in which recovery from certain ophthalmic affections has resulted from incisions by means of the galvano-cautery into the anterior extremities of the turbinal bones, by the removal of polypi and by the cure of nasal ulcerations. Dr. Trousseau records corroborative cases. One of them was a distressing case of double blepharospasm, in which potassium bromide, quinine, hydrotherapeutic measures, continuous currents, and metallo-therapeutics had been successively tried, resection of supraorbital nerve on the left side was proposed and declined. A radical cure was at length effected by the ablation of a few small polypi in the nose. Another case of migraine was cured by the same means, and was apparently due to the constant irritation of the polypi. A third case of mydriasis, the cause of which was not known, was cured by healing two small ulcerations of the mucous membrane of the nose. Lastly, Dr. Trousseau records several cases of asthenopia, in which the symptoms were relieved or removed by treatment directed to the nasal mucous membrane.

3. Treatment of blepharospasm.

Dr. Valude (Archives d'Ophthalmologie, t. ix., No. 3, 1889, p. 273) observes that blepharospasm of nervous origin, and due neither to an old or recent traumatism, nor to any irritation of the external parts of the eye, is very obscure in its nature, and little understood by ophthalmologists. It has been named "reflex," which affords no explanation of the true cause. Dr. Valude agrees with

M. Giraud in admitting two sets of causes for blepharospasm—in the first place, traumatic or other lesions of the cyclids, conjunctiva, or cornea; and secondly, nervous irritation. To the first class belong blepharospasm caused by photophobia associated with phlyctenular keratitis and with strumous ophthalmia. The treatment of this form corresponds with that adopted in spasm of other sphincters—namely, dilatation, which may be practised with a spring speculum applied for a few minutes daily, or by the plan of massage forcé suggested by M. Abadie, which consists in covering the skin around the eye with vaseline, and then pressing the thumbs in a radiating direction from the globe

towards the periphery.

The blepharospasm of the second class-that is, of nervous origin-is either a manifestation of an hysterical neurosis or of mental trouble. Such forms of blepharospasm may be seen in cases of dental lesion or a cicatrix of the skin; and reference is made to the points of issue of nerves discovered by Von Graefe, compression of the nerve at such points - as, for example, at the supra-orbital, infra-orbital, or mental foramina, over the superior cervical ganglion of the sympathetic, the spinous processes of the cervical vertebræ and the brachial plexus-sometimes diminishing and sometimes arresting the blepharospasm. Dr. Valude gives a case in which it appeared to be due to degeneration of the nervous system. Success has attended the hypodermic injection of a 10per-cent, solution of curare, thirteen drops being injected on each occasion, and the injection being repeated three times daily. Dr. Valude speaks strongly against section of the external angle of the eye, but says nothing in regard to its connection with errors of refraction and its treatment by appropriate glasses to correct the defect.

M. A. Dehenne (Hirschberg's Centralblatt, Jahrgang xiii., Januar, 1889, p. 10), in a communication made to the Société de Médecine, Paris, recommends section of the supra-orbital nerve for tonic blepharospasm. He finds that section of one nerve often cures the affection of both eyes. The mode of operation is to raise a fold of skin over the point of exit of the nerve from the orbit, transfix it with a bistoury, and cut down upon the bone; a pressure bandage may then be applied.

4. A powder for granular lids.

Dr. Wicherkiewicz (Recueil d'Ophthalmologie, ser. iii., année 11. No. 5, Mai, 1889) recommends the use of a powder having the composition—powdered tannic acid, one gramme; finely-powdered boric acid, three grammes; to be thoroughly mixed. In applying it, a quantity, varying according to the severity of the disease, is

to be insufflated upon the conjunctival membrane. He states that it is very effective in the soft granulations that appear in the culde-sac. Cocaine is first applied, then the lid is everted, the contents of the granulations are squeezed out, and after the removal of the blood and expressed material, and the drying-up of the surface, the powder is applied. The treatment is continued for a period varying from one to four weeks. At the end of this time the trachomatous granulations will be found to have disappeared. The mucous membrane, too, may become smooth, and its injection diminished. The secretion gradually disappears. It seems to be adapted for severe cases only.

5. Pathogeny of chalazion.
Dr. Lagrange, of Bordeaux (Archives d'Ophthalmologie, Mai-Juin, 1889), has made a careful research into the nature of chalazion, and draws the following conclusions :- Chalazion presents three periods in its development; the first characterised by the retention of epithelial products in the gland of Meibomius; the second consisting in adenitis and periadenitis consecutive on this retention and leading to destruction of the tarsal cartilage; and the third consisting in the projection of the tumour under the conjunctiva (constituting internal chalazion), or towards the skin (constituting external chalazion). The contents of chalazion are composed of young embryonic cells and a few scattered epithelial débris. These epithelial débris contain rounded isolated micrococci, visible either in the interior of the epithelial cells or by their side. The embryonic cells do not contain microbes. The microbes appear to play a very secondary part in the production of the affection. There are no giant cells in the morbid mass; its structure exactly resembles that of a fleshy granulation. The term granuloma, as used by Virchow, exactly expresses its histological characters.

6. Treatment of lacrymal obstruction.

Signor Morano (Hirschberg's Centralblatt für praktische Augenheilkunde, Januar, 1889, p. 15) is satisfied that incisions made in the lacrymal sac-as, for example, those made with a Stilling's knife-lead to the formation of dense fibrous constrictions. He recommends a dacryocystitome he has devised, which has an olive shaped head, but is considerably thickened at the base. He lays particular stress on the fact that not only the dome-shaped upper end of the sac is split by the vertical introduction of his knife, but the lower wall of the inferior canaliculus. After the section the lacrymal sac is treated by the application of the nitrate-of-silver stick, and the introduction of sounds. In the discussion which followed the reading of this paper before the Congress of Italian Oculists at Naples, Signor Angelucci suggested that the knife used by Morano should be made of various sizes. Signor Bono approved of the application, in some instances, of caustics to the sac.

7. Employment of naphthol in ocular therapeutics. M. Vignes (Recueil d'Ophthalmologie, Janvier, 1889, p. 33) read a paper before the Société d'Ophthalmologie de Paris, in which he stated that the experiments of M. Vignal had demonstrated that naphthol, in doses of 1 to 2 centigrammes to the thousand, impairs the growth of staphylococcus aureus and albus, and of gonococcus, and in doses of 15 milligrammes to 3 centigrammes entirely arrests the development of these microbes. The same results had been obtained by Park, who in a late American Congress showed that naphthol, alone amongst antiseptics, prevented the growth of these lower fungi. M. Budin was the first to introduce it into ophthalmology. Naphthol, from the observations of MM, Budin and Vignal, seems to have no action on the transparent membrane; and, having followed their proceedings, M. Vignes stated that he had for several months, in certain forms of conjunctivitis, made extensive use of this germicide for lotious and dressings, as well as after cataract operations, and in cases of muscular advancement, in the proportion of 1 to 2,500, with the addition of 2 grammes of alcohol. Instruments dipped in this solution retain their sharpness. A lively discussion followed the reading of the paper, M. Abadie pointing out that in benign forms of conjunctivitis many antiseptics were effective, whilst in the malignant forms he urged the high value that should be placed on nitrate of silver. M. Gillet de Grandmont had also used the naphthol, but had found that it caused too much irritation of the conjunctiva. M. Meyer remarked that the failure of various antiseptics was due to their not being properly applied, and that in his practice he took infinite pains to thoroughly cleanse and wash out all folds of the conjunctiva. MM, Galerowski, Trousseau, and other speakers, seemed to prefer nitrate of silver.

S. The employment of creolin in ophthalmic disease.

Dr. Grossmann (Wien. Med. Presse, 1888, Nos. 31 and 32) has employed creolin with advantage in a case of traumatic keratitis with hypopyon. The ulcer was painted in the first instance with a solution of the strength of one-half per cent., and subsequently of the strength of one per cent., and healing was effected in the course of a few days. After this success the same substance was applied to a great variety of ulcers of the cornea with equally favourable results. He found the same remedy very serviceable

in cases of the disease of the cornea named by Emmert "keratitis dentritica exulcerans mycotica," which he considers to be analogous to those of xerosis epithelialis conjunctivæ with idiopathic hemeralopia, a disease in which creolin might also be tried. He has finally found it useful in cases of keratitis phlyctenulosa with great photophobia and blepharospasm. It proved of no service in cases of blennorrhea of the lacrymal sac and simple conjunctivitis. Dr. Grünhut (Prager Med. Wochens., 1888, No. 39) has also found creolin useful in many forms of blepharitis, but not in trachoma.

A. Alt (Amer. Journ. of Ophthalmology, Jan. 7, 1889) also recommends the use of creolin in solutions of 1 and 2 per cent. in all forms of external disease of the eve, considering it to be superior to the sublimate in its effects on catarrhal conjunctivitis. phlyctenular ophthalmia, ciliary blepharitis, ulcers of the cornea, and diseases of the lacrymal sac. It acts particularly well in cases of parenchymatous keratitis, whether it originates from scrofula or from syphilis. It constitutes an excellent hæmostatic in operations upon the lids, and in cases of enucleation. The 2 per cent, solution is a good disinfectant for instruments, and does not impair the sharpness of their points and edges. It produces severe pain, which is not materially alleviated by cocaine, but has no other disadvantage.

9. Helleborin as an anæsthetic. Venturini and Gasparini (Bolletino medico della Real Accademia dei Fisiocritici di Siena, Anno vi., 3) found that three or four drops of a solution of helleborin of the strength of I per cent. dropped into the conjunctival sac of dogs and rabbits caused complete anæsthesia in the course of fifteen minutes, without any alteration of the lids or of the epithelium of the cornea, without change in the size of the pupil, in the tension of the globe of the eye, or of the visual power, and, in particular, without irritation of the conjunctival mucous membrane. The anæsthesia lasted more than half an hour. The same results were obtained by the subcutaneous injection of the drug, but they cannot recommend this method of employing it, on account of its powerful toxic action, as a cardiac depressant. At Professor Bufalini's suggestion the same authors undertook a series of experiments with other glycosides of the digitalin group, and found that the extract of strophanthus hispidus when neutralised and deprived of alcohol possesses the same anæsthetic properties. Professor Bufalini himself, on the other hand, found in the course of his experiments on the action of jequirity that the saponine group possesses strongly irritant properties. Venturini and Gasparini recommend that analogous glycosides should be tested in regard to their anæsthetic properties; and mention, amongst others, digitalin (without digitonin), adonidin, scillain, convallarin, apocinein, and antiarin.

10. Ephedrin and pseudo-ephedrin.

M. de Vriese (Annales d'Oculistique, Mars-Avril, 1889, p. 182) gives an account of these substances and of their applicability as remedial agents in ophthalmic disease. Ephedrin is an alkaloid contained in the Ephedra vulgaris, varietas helvetica, and was first introduced into commerce by M. E. Merck, of Darmstadt. When pure, it crystallises in needles soluble in water and alcohol, insoluble in ether. It melts at 210° C. From other species of the same genus he isolated another alkaloid, to which he gave the name of pseudo-ephedrin. The hydrochlorate dissolves easily both in water and in alcohol. From its solution in a mixture of alcohol and ether the hydrochlorate crystallises in needles or in colourless lamellae, which melt at 174° to 176° U. Experiments made with a 10 per cent, solution of the hydrochlorate of ephedrin caused dilatation of the pupils after 40 to 60 minutes without inflammation or any modification of the accommodation. The duration of the dilatation varies from 5 to 20 hours. The continued employment of it for a fortnight caused neither conjunctivitis nor other inconvenience. Its use occasioned no change in the degree of intra-ocular pressure. It is well adapted for ophthalmoscopic purposes. It is preferable to homatropine, on account of the short duration of its mydriatic action, the facility with which it can be prepared, and its cheapness.

Pseudo-ephedrin causes considerable dilatation of the pupil—slowly with 1 per cent. solution, quickly with 10 to 12 per cent. solution; in the latter case in the course of about half an hour. The instillation should be repeated on two or three occasions, and each time several drops should be used. Neither the accommodation, the refraction, the tension, nor the sensitiveness

is in any way affected.

11. Hypodermic injections of pilocarpin in alcoholic amblyopia.

Messrs. Nucl and Leplat state that, adopting the suggestion made by M. Coursserant to M. Abadie (Annales d'Oculistique, L. ci., Mars—Avril, 1889, p. 149), they have employed with much success hypodermic injections of pilocarpin in cases of alcoholic and of nicotinic amblyopia, still further improvement sometimes taking place under the influence of potassium iodide. Staderini (idem, p. 193) has found that injections of pilocarpin are useful

in other affections of the eve, especially in those of rheumatic origin : as, for example, in episcleritis, iritis, and idiopathic optic neuritis. They also act beneficially in inflammatory states of the iris and of the ciliary body supervening upon fragments of the cortical substance and capsule being left in the anterior chamber after cataract operation. Moreover, they promote the absorption of unorganised opacities in the vitreous humour, especially when these opacities are the consequence of recent infiltration. In certain forms of progressive myopia, and in detachment of the retina, benefit may be obtained, but usually only of a transitory nature.

12. Eserine in the treatment of corneal ulcers.
Dr. Herbert Harlan, of Baltimore (Hirschberg's Centralblatt für die Augenheilkunde, Marz, 1889, p. 87), has published a series of cases of ulcer of the cornea, chiefly caused by fragments of oyster-shell, which he has successfully treated by means of eserine solution. This remedy, he thinks, acts beneficially in two ways-first, by contracting the pupil, reducing the quantity of light admitted into the eye; and, on the other hand, by reducing the tension of the globe, and thus promoting the process of cicatrisation.

13. Treatment of cataract.

At the annual meeting of the British Medical Association, held at Leeds, the subject of cataract was discussed at great length (British Medical Journal, Aug. 24 and Sept. 28, 1889). The question of ripening immature cataract was the subject of the address of Mr. Anderson Critchett, who gave an account of the different methods that have been devised or adopted by different observers, without, however, committing himself to the exclusive practice of any of them. The question of the performance of extraction of the lens, with and without iridectomy, was considered by various speakers, some expressing themselves in favour of iridectomy as affording a better means of freeing the chambers of the eye from cortical substance, whilst others maintained that equally good results could be obtained by leaving the iris intact.

14. Extraction of the lens with the capsule in the operation for cataract.

Dr. J. Jacobson, of Königsberg (Hirschberg's Centralblatt für Praktische Augenheilkunde, Mai, 1889, p. 129), gives the following directions for the extraction of the lens and capsule in the operation for cataract :- In the case of the right eye the patient must be prepared for the operation by the sedulous adoption of all Lister's antiseptic measures. A drop of atropine sulphate solution. containing one part in 500 is to be instilled; cocaine solution to be then used till complete insensibility is attained. Half an hour before the operation, a rectangular conjunctival flap, 10 to 12 mm. in length and 6 to 8 mm. in breadth, separating the conjunctiva quite down to the sclerotic, is made and turned back. An iridectomy knife of medium size is now made to enter the eye in the outer and lower quadrant, about 4 mm. from the scleral border, in a tangential direction. A small instrument like a squinthook is now introduced at the nasal angle of the incision, with its convexity upward, the head to the left with its surface on the iris, then through the pupil and behind the iris till it is above the upper border of the lens. The hook is now turned one-quarter of a circle, so that the edge of the lens is embraced by the concavity of the hook, which is gently drawn towards the incision. When the operator is certain he has seized the lens, he rotates the hook so that the head lies not against the lens but to the side of it, and presses it strongly towards the zonula. The hook is withdrawn, re-introduced in the opposite direction, and again made to press upon the lens. The zonula is now broken through. If any doubt exist upon the point, the manipulation can be repeated without danger. .The first part of the operation is then completed. In the second period the patient is placed under the influence of chloroform. Eserine is used to such an extent only as shall still leave it possible to introduce the hook through it if required. A sharp Graefe's knife is now used to make two short cuts through the sclerotic; a short, stiff, round-ended, sharp knife is entered into the temporal cut, passed on behind the iris, and brought out at the nasal opening, and the section through which the lens is to escape made. The lips of the wound are separated, and the lens drawn out with a hook. The conjunctival flap is united by a suture and iodoform, and a bandage applied. The proceeding seems to be rather complicated, requiring three knives, and the wound lying chiefly in the ciliary region, but the absence of secondary cataract is, of course, a great advantage.

15. Intra-ocular lavage after cataract extraction.

M. Mugniéry (Thesis, Lyons, 1889) in his thesis endeavours to show that the intra-ocular injection of antiseptic or aseptic fluids is not only, as McKeown, Gayet, and others have maintained, extremely useful after cataract operations, because it clears the pupil, disinfects the wound, favours the adjustment of the lips of it, renders the introduction of instruments in many cases unnecessary, as well as the instillation of atropine or eserine, but that such injection of fluids may be employed with other ends in view. Thus, for example, it can aid in the removal of pus in hypopyon,

and in the removal of blood in extravasations of that fluid, and lastly it can act as an antiseptic. He prefers the injection of aseptic to antiseptic fluids, since the latter may prove injurious to the tissues. The chief contra-indications to the use of such injections are an unruly patient, augmentation of tension, and escape of the vitreous.

16. The operative treatment of separation of the retina.

Herr Schöler (Berliner Med. Gesellschaft, Sitzung v., 6 Feb., 1889; Hirschberg's Centralblatt für Augenheilkunde, 1889, p. 114) read an important paper on this subject before the Berlin Medical Society. Separation of the retina was first recognised by Ware at the beginning of this century, and he first recommended puncture of the sclerotic. The observations of Sichel, Heinrich Muller, Ivanoff, and Leber have gradually demonstrated that atrophy and absorption of the vitreous humour usually precede retinal detachment. Ware's mode of treatment was often attended with excellent results which lasted for some weeks, but were usually followed by relapses. More complicated proceedings were subsequently adopted, in which a syringe with two tubes was employed, and the subretinal fluid was removed by exhaustion. Then a thread was passed through the sclerotic with the view of permitting slow filtration. Still more recently free incision through the sclerotic has been recommended, which was discarded for the introduction of a white hot needle into the sac, and for the operation of trephining the sclerotic. The results of all these procedures appear to have been disastrous, and Schöler came to the conclusion that separation of the retina should not be treated by surgical but by the topical action of appropriate remedies. He endeavoured to discover some means which might ameliorate the course of inflammatory troubles in the eye-as, for example, in panophthalmitis when introduced into the vitreous. He made experiments on animals with tincture of iodine, mercury iodide, Lugol's solution, and with solutions of corrosive sublimate and iodised glycerine. Potassium iodide was tried, but found to act too feebly. Iodised glycerine, on the other hand, acted too violently; but tincture of iodine was found to give constant and satisfactory results. When six drops were introduced into the vitreous, active changes were to be seen for six or eight days, consisting in chorio-retinitis with diffuse cloudiness of the preretinal layers of the vitreous, which then gradually subsided. The results of these cases led Schöler to try the action of the injection of iodine tincture into the vitreous of man. A patient presented herself with extensive detachment of the upper part of the retina. In the course of eight days remarkable improvement set in, and she was able to read. Sixteen days afterwards a relapse occurred, and two concentric rings of separated retina could be seen. Schöler now injected six drops of the iodine tincture, not into the sac, but, traversing this space with the instrument, into the vitreous beyond. In this, as in four other cases in which the same quantity was injected, sharp pain immediately set in, which lasted for half an hour, and for a day or two there was slight hyperæmia of the sclerotic. Under the ophthalmoscope the parts presented a cloudy aspect. course of the following weeks a gradual recession of the chorio-retinitis took place. The final result of this first case was complete reapplication of the retina to its bed, and the recovery of vision to $\frac{1}{7}$ th. In a second case a posterior polar cataract formed after the injection. In a third the vision was recovered to one-fourth the normal amount. In a fourth the separation of the retina was limited, no harm resulted from the injection, and the vision was as good as that of the opposite eye. A fifth case was still under treatment. In all these cases other measures were adopted besides the injection of iodine—as intramuscular injections of iodide of mercury, resting on the back for fourteen days, and appropriate low diet. At the close of his address Herr Schöler dwelt, not upon the curative results obtained in these three cases. but upon the fact that a new method of treatment was opened up which offered a wide field for research and experiment.

DISEASES OF THE EAR.

By GEORGE P. FIELD, M.R.C.S.,
Aural Surgeon to St. Mary's Hospital.

1. On the etiology and treatment of boils in the external meatus.

Loewenberg (Berliner Klin. Wochenschrift, 1888, No. 28) again recommends the local application of a saturated solution of boric acid and alcohol. If there be much pain, he uses a ten per cent. solution of cocaine and alcohol. He believes that he can thus not only cut short the attack, but also prevent recurrence.

Cholewa (Therap. Monatshefte, June, 1889, p. 262) finds that menthol, even in a very weak solution (1 in 100), arrests the development of staphylococcus aureus. He presses plugs of cotton wool impregnated with a 20 per cent. solution of menthol and olive oil into the external meatus, and changes them every twenty-four hours.

Bronner reports to me that he has frequently tried menthol in the manner suggested, but finds that it neither relieves the pain nor arrests the progress of the affection. Glycerine of carbolic acid, B.P., acts much more readily.

Wm. Hill, however, has formed a better opinion of menthol in this affection, but he employs an alcoholic, instead of an oily, solution. In addition, he advocates the old-fashioned treatment of giving brewer's barm internally, two or three ounces thrice daily, and he further insists on a more or less diabetic diet, saccharin being substituted for sugar when necessary.

Schimmelbusch (Archiv für Ohrenheilkunde, xxvii., p. 252) shows that staphylococcus aureus enters the skin not through any existing wound or through the sweat-glands, but down the hair-follicles, between the hair and the root-sheath. Local pressure or rubbing, etc., presses the cocci down the hair follicles. He rubbed the cocci into healthy skin, and thus produced a localised furunculosis. He then excised the skin, and examined it under the microscope. In one case only had the cocci penetrated through any lesions or down the sweat-glands. He always found

large quantities of the cocci in the hair follicles between the hair and the root-sheath.

2. Treatment of osseous growths of the ear.

Discussion at Leeds (Brit. Med. Assoc.) was opened by Mr. Field, who again advocated the use of the foot-drill for the removal of ivory growths; he had operated on twenty-one cases in fifteen months. He had used an electro-motor on several occasions, but preferred the instrument worked by the foot, because it could be more easily stopped. Soft growths could often be snared or removed with bone forceps. Sir. Wm. Dalby had adopted Winterbottom's electric drill on account of the great speed attainable (2,500 revolutions per minute). Mr. Geo. Stone used the chisel and mallet. Drs. Pritchard, Barr, and Guye spoke of the small number of cases which required operation, the first-named estimating this number at three per cent. Mr. Shield advocated a revival of the old operation of displacing the auricle in some cases where the lumen of the outer part of the meatus was small.

3. Antiseptics in aural surgery.

Bronner (Brit. Med. Journ., Feb. 23, 1889) urges that all catheters and specula should be boiled after being once used. The tympanum should be inflated with air which has passed through cotton wool. The same aurist has modified Lucae's apparatus for impregnating the inflated air with menthol, eucalyptus, or other disinfectant.

4. Painful hyperæmia of the tympanum.

Glycerine of carbolic acid (Amer. Journ. Med. Sciences, Jan., 1889) in otalgia associated with myringitis is strongly recommended by Morpurgo, of Trieste, who advocates the use of a 10

per cent. solution every two hours.

[Hewetson, of Leeds, first pointed out the remarkable analysis effects of the ordinary B. P. preparation (1 in 5) when instilled into the ear in otalgia. Guye, of Amsterdam, who uses the 1 in 5 preparation, says he has never seen it fail. It must never be applied if there is a perforation of the membrane,—G. P. F.]

5. Removal of the ossicles.

Sexton (Proc. Brit. Med. Assoc., 1889). Paper read in the Otological section at Leeds. This aurist personally explained his operation for the removal of the malleus in cases of intractable otorrhea, and showed his instruments.

[Operations of this nature were alluded to at length in the "Year-Book" for 1889. So far as I am aware, these operations

have not been performed in Great Britain.]

6. On opening the mastoid.

Bronner (Med. Press and Circ., July 31, 1889) recommends

this measure for chronic, intractable otorrhea, by means of the chisel (Schwartze's) in :-

(a). All cases of chronic otorrhea in which local treatment has

failed, especially in tubercular subjects.

(b). All cases where there is a small fistula of the mastoid process.

(c). All cases of recurrent mastoid abscess.

It will be seen that Dr. Bronner goes farther than most aurists in recommending the opening of the mastoid cells. The most useful indication for operating in a chronic case is recurrent pain.

Macewen, of Glasgow (*Proc. Brit. Med. Assoc.*, 1889), recommends the use of an American burr driven by a surgical engine as preferable to the chisel, whenever there are intracranial lesions, because the force of impact is undesirable in such cases.

[I myself prefer a small circular trephine, similar to that used for drilling outgrowths of the nasal septum, driven by a surgical

(dental) engine.

7. On the local treatment of granulations of the middle ear.

Nation (Revue de Laryngologie, d'Otologie, etc., May 1, 1889) reports on the treatment of granulations, as used in the clinique of Prof. Politzer. He recommends the application of chloride of iron and the galvano-cautery. The iron can be used in the solid form or in solution. The solid form ought to be used if the granulations are large. The application is quite as efficacious as that of chromic acid, and not at all painful. Sometimes the granulations are removed by the curette. Chromic acid is no longer used, because of the great pain which often follows its use. Nitrate of silver is also discarded.

[He does not mention alcohol.]

8. On the use of creolin in the treatment of otorrhea.

Kretschmann (Archiv für Ohrenheilkunde, xxviii. p. 68) recommends the use of creolin, in a solution of 1 in 500, for syringing the ear in cases of otorrhea. Stronger solutions cause burning pains. He uses a solution of 1 in 100 for ulcers of the nose, and of 1 in 1,000 as a nasal douche in cases of rhinitis with much discharge or with a tendency to the formation of crusts.

Ignaz Purgesz (Gyvgyaszai, No. 51, 1888) syringes out the middle ear from the external measus and through the Eustachian

tube with a 1 in 1,500 per cent. solution of creolin.

Lichtaitz (Bull. Med., No. 78, 1888) uses acreol in solution of 1 in 1,000 for syringing out the ear, and stronger solutions as ear-drops. He recommends creolin in cases of foul-smelling otorrhoa.

9. Two cases, in which cerebral symptoms were caused by the introduction of cocaine drops into the middle ear.

Suarez de Mendoza (Revue de Laryngologie, d'Otologie, etc., July 11, 1889). In one case he had incised the drum head, and then dropped some cocaine solution into the middle ear, prior to the attempts to remove some adhesions. The patient, a lady of 47, suddenly grew pale and giddy and fell off the chair. The symptoms lasted for over four hours. Complete recovery did not take place till the following day.

In the second case he had dropped the cocaine into the middle ear through an old perforation prior to the application of electrolysis to the Eustachian tube. The symptoms were similar to those in the first case, but not so severe. They lasted nearly

two hours.

On tenotomy of the tensor tympani muscle in the treatment of progressive deafness (sclerosis).

Cholewa (Zeitschrift für Ohrenheilkunde, xxix., 3, p. 249) reports on thirty cases in which he divided the tensor tympani for sclerosis (chronic dry catarrh) of the middle ear. He uses a modified Weber-Liel's knife, and incises the drum-head just in front of the short process of the malleus. He carefully defines the cases in which, according to his experience, the operation ought to be performed.

11. On the use of vapour of iodoform in affections of the Eustachian tube and middle ear.

Delie (Revue de Laryngologie, d'Otologie, etc., Feb. 15, 1889) blows vapour of iodoform through the Eustachian catheter in the following cases:—

1. Acute and chronic catarrh of the Eustachian tube. In the

former only when the pain has passed off.

2. Acute catarrh of the middle ear. Not if there be any pain

or if paracentesis has been made.

3. In chronic catarrh of the middle ear. After the use of the vapour the deafness sometimes increases for one or two days, and then decreases.

 In otorrhea. Large quantities of the vapour are used in these cases, and the external meatus is filled with cotton-wool.

He introduces the iodoform into a glass tube and heats this over the gas. Patients never complain of pain, as is the case if tincture of iodine is used.

12. Severe tinnitus relieved by the local application of ether fumes.

Boglan (Thérap, Gazette, Feb. 15, 1889) records a case in which severe tinnitus was cured by blowing ether fumes through the Eustachian catheter into the middle ear.

13. On the dilatation of the Eustachian tube.

Menière (La France Méd., April 2, 1889) speaks of the great importance of keeping the Eustachian tube well dilated. For this purpose he uses thick olive-shaped bougies. In some cases he applies the tine ture of iodine locally.

14. Bougieing the Eustachian tube.

Geo. Stone (Proceeding Otol. Sect. B. M. A., Leeds, 1889) recorded a case of Eustachian obstruction which was relieved by persistent bougieing, and advocated a more extended use of this practice,

[The practical drawback to this useful method of treatment is the sensitiveness of the Eustachian tube. Patients in my experience will rarely submit to a thorough bougieing operation twice, even if carefully done under cocaine.]

15. A new instrument for the local application of remedies to the Eustachian tube.

Laker (Archiv für Ohrenheilkunde, xxviii., 3, p. 211) describes a syringe for the local application of cocaine or nitrate of silver to the nares and Eustachian prominence. It consists of an ordinary Pravaz syringe, to which is attached a long and thin silver tube. To the end of this there is fastened a plug of cotton-wool. The syringe is filled with the fluid required, the cotton-wool applied to the diseased or painful spot, and the fluid then pressed into the cotton-wool.

 On the uses of electrolysis for granulations or polypi of the middle ear.

Gompers (Wiener Med. Blätter, 1888-89) does not find this treatment so very successful. It is very painful and often of no use. He places the kathode on the mastoid process and the anode, with a platinum point, in the granulations.

17. A new method of bandaging the ear.

Loewe (Monatsblätter für Ohrenheilkunde, Oct., 1888) recommends the use of plugs of cotton-wool for otorrhæa. It is most useful in acute cases. He presses small pieces of cotton-wool up to the membrana tympani; then uses Politzer's method, removes the cotton-wool and puts in fresh plugs. He thus fills the whole of the external meatus, and, if there be much secretion. also the concha.

This appears to be a most dangerous and objectionable procedure.

18. On the use of boric acid in otorrhea. Stacke (Deut, Med. Wochenschrift, 38, 1888) and Meyer (Archiv für Ohrenheilkunde, xxvii., p. 34) both draw attention to the danger of local application of boric acid powder in cases of otorrhoea.

19. On acute inflammation of mastoid cells and treatment by trephining the cells without opening the mastoid antrum.

Hessler (Archiv für Ohrenheilkunde, xxvii., p. 185 and xxviii.) reports on the frequent occurrence of inflammation of the mastoid cells in which the mastoid antrum is not affected, and in which, therefore, the operative opening of the antrum is not necessary. In these cases the cells at the apex of the process are mostly affected, and the heat, pain, and swelling are, therefore, more marked at the apex. If the antrum is affected the pain and swelling are more marked behind the external meatus, flammation in these cases spreads very quickly, not only over the whole of the mastoid process, but also on to the surrounding tissues. Hessler records eighteen cases, with minute details of the history and treatment.

20. Investigations on the influence of the shape of the skull on the topographic position of parts of the temporal bone, and their relation to one another.

Koerner (Zeitsch. für Ohrenheilkunde, xix. 4, p. 322) proves by sections of a large number of temporal bones that the layer of bone between the floor of the middle cerebral fossa and the roof of the external auditory meatus is thicker in dolichocephales than in brachycephales. And that in the latter also the flexure sigmoidea of the sinus transversus is deeper than in the former. These facts clearly prove that in cases of otorrhea there is greater danger of cerebral affections in brachycephales than in dolichocephales.

21. On otomycosis of the external auditory canal. Siebenmann (Zeitsch. für Ohrenheilkunde, xix., p. 1) reports on fifty-two cases of otomycosis. He thinks that the affection is much more common than is generally supposed (I per cent. of all aural cases) and that it is mostly brought on by the local use of He recommends the local application of a 20 per cent. solution of salicylic acid and alcohol, three times a day for about ten minutes, and to syringe the ear frequently with a warm boric acid solution.

22. How to render minor operations painless. Barth (Zeitschrift für Ohrenheilkunde, xix., 3, p. 231) recommends the use of electric kataphoresis with a cocaine solution for small aural or nasal operations. He attaches cottonwool, saturated with a 10 per cent. cocaine solution, on to the kathode, and places this on the part to be operated on. The anode is placed on the back of the neck. The current is passed for about fifteen minutes. He has thus operated on the drum-head, mastoid process, and boils in the external meatus without causing much pain. Not satisfied, however, with this mode of procedure, Barth recommends that the patient also be hypnotised. He records numerous cases.

98. The dangers of syringing in cases of otor-

Von Bergmann (Berliner Klinischer Wochenschrift, 52, 1888, and 3, 1889) draws attention to what he calls the "unsurgical proceeding" of syringing out the middle ear from the external meatus in cases of otorrhœa. He argues from his experience in the surgical treatment of wounds, especially bullet wounds, that if one syringes out the wound the pus, etc., is driven deeper into the surrounding tissues, instead of removing it, and that this, therefore, causes the inflammation to spread.

[He does not, however, suggest any other method of removing the pus from the middle ear. Most aurists teach their patients to evacuate tympanic secretions by means of Valsalva's, or by Politzer's, method of inflation. Syringing by way of the Eustachian tube could not be carried out by a patient or his friends.]

24. Artificial ear-drum of celloidin.

Kats (Deutsch. Med. Wochenschrift, July 11, 1889) recommends the use of small discs of celloidin, to the centre of which a piece of twisted cotton wool is attached. Before use the disc is dipped into carbolic oil. The advantages of these discs are that they are very cheap, do not irritate, and do not shrink, dissolve, or get out of shape. A solution of celloidin 10.0, spir. absol. and ether \$\bar{a}\bar{a}\$ 50.0—is poured into a flat dish about \$1\frac{1}{2}\$ mm. high. After evaporation, the discs are cut or punched out.

25. Syphilitic deafness.

Turnbull (Phil. Med. Times, Sept., 1888) strongly recommends oleate of mercury inunctions.

26. Mycosis.

"Aspergillus Nidulans" (Münchener Med. Woch., April, 1889). Instillations of a 2 per cent. solution of salicylic alcohol for a week are advocated.

27. Artificial membranes. Ward Cousins (Proc. Brit. Med. Association, Sept. 1889)

showed a new antiseptic membrane in the Otological Section which promises to be of value. The contrivance is made of compressed antiseptic lint, shaped something like a hat, and is designed to be both a supporter of the remains of the tympanic membrane and an absorbent of slight discharges from the ear. Dr. Cousins has invented a combined probe and forceps for inserting and removing this so-called "artificial drum." It remains to be seen whether it possesses any advantages over a moist piece of antiseptic cotton-wool, over and above facility of introduction.

Blake, of Boston, U.S.A., on the same occasion, advocated a small circular piece of foreign note paper applied to the membrane over the site of the perforation. He had had encouraging results with this simple contrivance.

28. Obstructions of the nose and pharynx in relation to ear diseases.

Hewetson (Proc. Brit. Med. Assoc., 1889), dissatisfied with the ordinary methods of reducing nasal stenosis due to hypertrophy of the nasal mucous membrane, forcibly and rapidly dilates the nasal choanæ by a powerful crushing steel instrument shaped like a glove-stretcher. He has treated 300 cases of nasal obstruction and associated aural catarrh by this method of crushing the turbinated bodies with good results, and he has never seen any unpleasant complications or sequelæ.

William Hill showed, in the Otological Section, some intranasal guards for the safer application of caustic substances, such as chromic acid, to hypertrophied turbinated bodies. These instruments prevent the chromic acid from running down the throat and from cauterising other than the hypertrophied areas. He considers chromic acid quite as effectual as the galvanocautery.

29. On the influence of sea-air on diseases of the

Moure (Revue de Laryng., Otol., etc., March 15, 1889) draws attention to the fact that sea air has a very unfavourable influence on the affections of the external meatus, Eustachian tube, and middle ear. Sea-water is often very cold, and contains much organic matter, which acts as an irritant. The air itself is naturally saturated with moisture. Meteorological changes take place much more frequently, more suddenly, and in a more marked manner on the sea-coast than they do inland. As in all skin diseases, so also in affections of the external meatus and drum-head, does sea-air tend to aggravate the disease. Owing to

the sudden and frequent changes of temperature, to the large amount of moisture in the air, etc., the mucous membrane of the Eustachian tube, of the nares, and also any existing post-nasal growths, show a tendency to swell and become inflamed. If there be any serious exudation in the middle ear, this frequently becomes purulent; existing purulent discharge becomes more profuse, and is often followed by affections of the mastoid process.

[Moure does not mention that sea-bathing frequently brings on exostosis of the external meatus, nor the prejudicial effect of the noise of the sea on some forms of tinnitus.]

30. On the treatment of deafness by pilocarpin injections.

Field (Brit. Med. Journ., March, 1889) published an account of eighteen cases of labyrinthine (nerve) deafness, most of whom derived some benefit from this treatment; and in several the improvement as regards the tuning-forks test and the power to hear general conversation was most marked. Field not only administers the drug hypodermically, but also injects the solution up the Eustachian tube, through the catheter, in all cases where there is much concomitant middle ear catarrh. Woodhouse (Brit. Med. Journ., July, 1889) treated five cases of nerve-deafness by this method of injection, with negative results. Four of these cases were, however, sixty years of age or over, and therefore failure was obviously to be anticipated. In the fifth case—the only really suitable one—some benefit in hearing power at first took place, but was not maintained. [For further particulars see "Year-Book" for 1889, and Field's paper quoted above.]

31. Intracranial lesions the result of aural disease.

Two important communications on this subject were made during the year 1888—one by Dr. William Macewen, of Glasgow, in his address delivered before the Otological section, Brit. Med. Association, at Leeds—the other by Mr. Arthur Barker, Hunterian Professor, at the Royal College of Surgeons. Macewen's communication may be consulted in the Brit. Med. Journal, and Barker's lectures (Illustrated Med. Journal) must be read in their entirety to be appreciated. In abscess, Barker believes the centre of the dangerous area to be situated at a point an inch and a quarter behind the centre of the external auditory meatus, and the same distance above Reid's base line. This surgeon recommends a small trephine hole at this spot, and then exploration through it with a trocar in all directions. He advocates silver drainage-tubes and sal-alembroth dressings. Cerebellar abscess

TO CHARTONIA OF MEATHERE

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DISEASES OF THE THROAT AND NOSE.

BY P. McBRIDE, M.D., F.R.C.P.E., F.R.S.E.,

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THE year which has just passed has been somewhat uneventful in the annals of laryngology and rhinology. Many articles have been written on these subjects, but few have contributed in any degree towards improved therapeutic methods. Indeed, those who have been called upon to wade wearily through the many literary efforts may reasonably complain of the small amount of information derived from the reading of many pages. The most important contribution is Voltolini's large work on diseases of the nose and naso-pharynx, to the discussion of which we have devoted what space was at our disposal, after referring to such other literature as seemed to call for notice. Unfortunately the distinguished author has since been removed from his labours, and the combined sciences of otology, laryngology, and rhinology have lost a worker who had studied them from the beginning, and yet kept abreast or ahead of the times in all; while we suspect that his labours in perfecting new methods of examination (through-illumination, etc.) and treatment (electrolysis) will only be generally appreciated after the lapse of time.

GENERAL.

Moure's "Clinical Lectures on Diseases of the Larynx and Nose" (Recueil Clinique sur les Maladies du Larynx. Paris). This work is coming out in fasciculi, of which the first was published in 1884, and the second in 1889. We shall merely refer to those observations which strike us as original.

In pharyngitis he recommends, first, sprays of mineral water containing sulphur, then painting with chloride of zinc solution, and finally the application of iodine or capsicum. The latter he uses in the form of a mixture of tincture capsici with glycerine, in the proportion of 1—2 to 50.

The chapter in which the author discusses the effect of sulphurous waters on phthisis laryngea is one of the most instructive. He has no hesitation in affirming that the consumptive patient who submits himself to this treatment is extremely fortunate if his laryngeal disease be not actually increased as a direct result.

PHARYNX.

1. On resection of the styloid process in a case of dysphagia.

Rethi (Internat. Klin. Rundschau, 24, 1888, and Revue de Laryngologie, etc., Jan., 1889). It was pointed out by Weinlechner in 1882 that dysphagia is sometimes due to abnormality of the styloid process, and in one case he operated by fracturing the process, thus obtaining a successful result. Rethi's patient was a young man, who complained of pain in the region of the tonsil on swallowing. On palpation a hard body was felt, and diagnosed to lie outside of the gland. The probability of an elongated styloid process then suggested itself, and ineffectual endeavours were made to fracture it. Finally a portion of the osseous projection was removed by means of an incision made behind the tonsil through the mouth.

LARYNX.

2. On intubation of the larynx in croup.

Waxham (Chicago, 1888). After discussing the history of this operation from the time of its first suggestion by Bonchut to its successful development by O'Dwyer, and after a consideration of the instruments employed and the anatomy of the larynx, the author describes the method of introducing the tube in minute detail; but space does not permit us to do more than mention this fact. Waxham has, however, so modified the laryngeal tube by adding an artificial epiglottis worked by a fine spring, that the patient is enabled to swallow fluids without discomfort, "provided they are given half a teaspoonful at a time." A hundred and fifty cases are then recorded, with forty-one recoveries, the bulk of the patients having been under eight years of age. The work concludes by comparing the results of intubation and tracheotomy in croup. The advantages claimed by Waxham for the former are briefly as follows:—

1. It is less dependent on after-treatment, and therefore more likely to be successful among the poor.

2. No shock or loss of blood.

- 3. No anæsthetic required.
- 4. No injury to soft parts, and little pain.
- 5. No risk of erysipelas or septicæmia as results of an open wound.
- 6. The laryngeal tube is less irritating than the tracheotomy tube.
 - 7. No wound to close by slow granulation.
 - 8. Air enters the lungs through the natural channel.
 - 9. Recovery is more rapid after removal of the tube.
 - 10. Consent to the operation is more easily obtained.
- 11. "A comparison of statistics clearly demonstrates that by intubation we can save as large a percentage of cases at all ages, and a much larger proportion under the age of three years; and if all the reasons before given be deemed more esthetic than real, this one, when taken alone, clearly demonstrates its advantages beyond reasonable question."

We have quoted this passage verbatim, and can only add that Waxham seems to prove its truth by the light of carefully constructed statistics.

3. The treatment of laryngeal carcinoma.

B. Fraenkel (Deut. Med. Wochen., 1, 2, 3, 4, 5, 1889) in a long and elaborate article discusses the diagnosis and treatment of laryngeal cancer. It is, of course, only with the latter that we are here concerned.

Starting from the hypothesis that carcinoma is at first a purely local affection, the author insists upon a diagnosis being made as soon as possible, and then, if practicable, removing the neoplasm by endo-laryngeal operation. He describes briefly his first case, in which not only was there laryngeal cancer, but also an enlarged gland in the neck. The latter was removed, and the laryngeal growth repeatedly extirpated between 1881 and 1884. Both the gland and the growth, when examined with the microscope, were found by Virchow to be undoubtedly cancerous, and sections of the latter were seen, among others. The patient has been well since 1884, is now seventy-seven years of age, and speaks with a loud voice.

Fraenkel in the present work adds five more observations, which, from the great importance of the question involved, we shall give in some detail.

Case I.—Male, et. fifty-seven, cancerous tumour of the size of a bean, removed from the right vocal cord; the patient was not again seen.

CASE II.—Male, set. sixty-seven, in October, 1886, complained of hoarseness, due to a neoplasm of the left vocal cord occupying

its anterior part, and extending into the sub-glottic space. Most of this was removed, but in November a sub-glottic tumour was still seen. In April, 1888, it had not increased. In December of the same year, however, the growth was distinctly larger. As much as practicable was again removed, and the fragments were on examination found to be cancerous.

Case III.—Male, set. forty-nine. A cancerous tumour as large as a lentil removed from the right cord in the summer of

1887. The patient is still quite well.

Case IV.—Male, at fifty-nine. Cancerous tumour occupying the whole length of the left vocal cord, removed July 4, 1888, but on the 26th of the same month malignant granulations appeared, and the whole vocal cord was removed (by endo-laryngeal operation). The wound healed, and there was no recurrence at the time of the last record (January 17, 1889).

Case V.—Male, age not stated, tumour of the right vocal cord, extending into the sub-glottic space, which microscopic examination of removed fragments showed to be cancerous. As the tumour could not be removed entirely per vias naturales, the vocal cord was removed with the aid of thyrotomy on Novem-

ber 5, 1888,

From these cases Fraenkel deduces that it is desirable to remove malignant tumours of the larynx through the mouth when we can reasonably expect to remove all the morbid tissue. One remarkable sentence we cannot but quote: "On the other hand, endolaryngeal treatment is applicable in cases of polypoid cancers of small dimensions when so situated that they can be reached through the mouth, and quite specially in cases of diffuse cancer." Fraenkel operates chiefly with cutting forceps and a cold wire ecraseur.

Much as we respect any opinion expressed by such an authority as B. Fraenkel is recognised to be, we cannot but cherish a doubt as to the expediency of the advice he gives. He admits that all diseased tissue should be removed; but to make certain of doing this by endo-laryngeal means, seems to us difficult. We are rather inclined to think more favourably of the treatment which was carried out in Case V., and we hardly think the series of cases produced are, on the whole, sufficiently definite to admit of this strong recommendation of endo-laryngeal treatment in laryngeal cancer.

4. Operations on the larynx by through-illumina-

Voltolini (Monats. für Ohrenheilkunde, etc., Mai, 1889) has published a paper on the first operations on the larynx through the

mouth by the aid of throwing light through the parts from without. This method of "through illumination" was suggested by the founder of laryngoscopy (Czermak), but to Voltolini belonged the credit of developing and utilising a method of examination which is, we regret to say, still scoffed at by not a few laryngologists. If a strong light be thrown upon the outer surface of the neck (cricothyroid membrane and upper part of trachea) and a laryngeal mirror inserted into the mouth, which is allowed to remain a dark cavity, the vocal cords and upper part of the trachea become beautifully illumined. Voltolini records a case in which he was able to apply the electric cautery accurately to a granulation on the posterior wall by this means, after having

failed when using the ordinary method of laryngoscopy.

In a previous paper (Monats. f. Ohrenheilkunde, Nov., 1888), as also in his latest work on the nose, Voltolini details his method of illumination. He places an electric lamp, having on its posterior wall a reflector, and a water lens in front, outside the larynx over the anterior part of the neck. This is held in situ by an assistant, while the surgeon examines with the mirror. (We cannot conclude this paragraph without expressing a hope that laryngologists will at least try this method of laryngoscopy before either expressing an opinion upon its merits or utterly ignoring it. In a case of hysterical aphonia in which I could not by ordinary laryngoscopy make certain that there was no subglottic laryngitis or thickening, I recently used this method, employing reflected sunlight concentrated on the crico-thyroid membrane, with perfect success.-P. McB.)

5. Lactic acid in laryngeal phthisis.

Stachiewicz (Mittheilungen aus Dr. Brehmer's Heilanstalt für Lungenkranke in Görbersdorf, 1889) corroborates the favourable opinions which have been expressed in many quarters concerning the action of lactic acid. While he also employs it in the way originally recommended—i.e., rubbing in with a brush or cotton wool holder,-he has also used it by means of a laryngeal syringe, employing at first 30 to 50 per cent. solutions (we gather from his article that this means 30 to 130), and only a few drops, but gradually increasing the strength and quantity up to a gramme or more. He considers this less irritating than the more direct method of brushing, and when the latter is necessary uses the ayringe first, in order to accustom the patient to the application.

6. The cure of the falsetto voice.

Mulhall (Internat. Journ. of the Med. Sciences, Aug., 1889) treats of cases in which the falsetto voice has persisted after puberty, and records an example in which cure was readily

effected by the very simple device of assuring his patient that his vocal apparatus were normal, and inducing him to sound deep notes while depressing the chin on the sternum. Mulhall first arrived at his method by observing that a patient with falsetto voice laughed in the ordinary way with the production of natural tones. In this case he was successful by training the patient to imitate the intonation of his laughter.

7. The use of tupelo dilators in laryngeal stenosis. Newman (Glasgow Med. Journ., Oct., 1888) has inaugurated a new departure in larvngeal surgery by the introduction of this method of dilating larvngeal structures, and he has also been able to record a series of successful results. His method, as we understand him, is intended only for such cases as are incapable of treatment by means of Schrötter's bougies, owing to the stenosis being either complete or nearly so. A sharp-pointed laryngeal probe is forced through the structure until it appears at the tracheotomy wound; to this are then attached two strands of silk ligature; these are now knotted together by their free extremities, and left in situ for twenty-four hours. Day by day more strands are drawn through, and when the oritice is large enough to admit a No. 10 catheter, a tupelo dilator, with the upper extremity waxed, is dragged through the stricture in the same manner. Finally, when the orifice is sufficiently large, the pharyngeal portion of an artificial larynx is introduced. Whether the last-named will eventually be permanently dispensed with is, or rather was when the paper was written, doubtful even in the non-syphilitic cases.

NOSE AND NASO-PHARYNX.

8. Unilateral incomplete Graves's disease after

removal of nasal polypi.

At a meeting of the Clinical Society of London, Semon (Brit. Med. Jour., April 20, 1889) showed a patient in whom, after removal of nasal polypi, exophthalmos of the right eye occurred within a day or two. Graefe's and Stellwag's symptoms were present, but there was neither enlargement of the thyroid nor increased frequency of the pulse. Curiously enough the patient had before suffered from asthma, but the removal of the polypi caused this neurosis to disappear. The observation is most interesting, and forms another link in the chain connecting nasal disease with functional anomalies of the nervous system.

9. Œsophageal spasm as a nasal reflex neurosis. Joal (Revue de Laryngologie, d'Otologie et de Rhinologie, Mai et Juin, 1889), describes in detail nine cases of resophageal spasm in which treatment directed to the relief of co-existing abnormal conditions of the nose effected a cure. These histories are of extreme interest, and if other observers should obtain similar successes, we shall have reason to hope that rhinology may assist in the cure of many examples of this obstinate affection. Joal draws the following conclusions from his paper:—

- 1. Œsophageal spasm often results from the throat and nose as a reflex neurosis.
- 2. Œsophageal spasm may have its origin in the tonsils, e.g., hypertrophy of the faucial tonsils, or cauterisation of the lingual tonsil.
 - 3. Spasm may result from naso-pharyngeal disease.
- 4. Œsophageal spasm ought to have a place among nasal reflex neuroses, and like asthma, cough, vertigo, megrim, etc., it may be caused by irritation of the nasal mucosa.
- 5. The existence of esophageal spasm is clearly established by the nine recorded cases.
 - 6. Usually hypertrophic rhinitis is the cause in these cases.
- 7. Hysteria does not appear to be a factor, as eight of Joal's nine patients were males, none of whom seemed to be hysterical.
- 8. Hypochondria is frequently associated with asophageal spasm, but does not seem to be the cause. Joal considers that both may, however, be due to the nasal disease.
- 9. The arthritic diathesis, on the other hand, seems to predispose to this as to other reflexes of nasal origin.
 - 10. The spasm begins in the upper part of the canal.
 - 11. Curative treatment should be directed to the nose.

10. On catarrh of the median recess of the naso-pharynx.

Kafemann (Der Catarrh des Recessus Pharyngeus Medius. Wiesbaden, 1889). This work is an important contribution to what was for a time known as Tornwaldt's disease. Not long ago this author directed attention to a form of naso pharyngeal catarrh, which was characterised by hyper-secretion from a localised area occupying approximately the middle of the naso pharynx. Sometimes, also, it was found that, instead of exuded secretion, the affection was as-ociated with the formation of a cystic tumour. Kafemann reviews the literature which has appeared since Tornwaldt's publication, and is inclined to believe that Schwabach is correct in asserting that the secretion in these cases flows, not from a special bursa, as held by Tornwaldt, but from a recess which is more or less commonly situated in the pharyngeal tonsil near the median line. At the same time he admits the accuracy and importance of Tornwaldt's clinical work.

which was referred to in the "Year-Book" for 1885. The treatment Kafemann proposes, however, is different from that adopted by the above-named author. Instead of employing the electric cautery, he advocates scraping with a sharp spoon, and in this way has obtained satisfactory results. He afterwards applies nitrate of silver or chromic acid.

(I may mention, without desiring in any way to claim priority, that I have, since the appearance of Schwabach's first paper, in which he seemed clearly to indicate that the secreting cavity in such cases was in all probability a furrow in the pharyngeal tonsil, treated several cases of localised catarrh of the naso-pharynx by scraping with Gottstein's curette. The result has been fairly satisfactory, and would, I have no doubt, have been more so had I adopted Kafemann's method of subsequently applying a caustic.—P. McB.)

11. On a new method of treating atrophic catarrh and ozena.

Ruault's (Archives de Laryngologie, etc., Avril, 1889) method consists in removing all the crusts, and applying camphorated naphthol (prepared by heating together one part of naphthol with two parts of camphor). This substance, a reddish-yellow liquid, is applied to the interior of the nose. If it be used pure, pain is caused; Ruault accordingly mixes it with oil of vaseline, the dilution varying according to the tolerance of the patient. The most important part of the treatment recommended, however, consists in applying frequently a spray of oil of vaseline, which keeps the parts constantly lubricated, thus preventing the formation of crusts and fætor.

12. On diseases of the nose and naso-pharynx.

Voltolini (Die Krankheiten der Nase, etc. Breslau, 1888). This work, although in outward form a text-book, is in many respects a series of original articles on diseases of the nose, by one who may be looked upon as the founder of scientific rhinology. All we can hope to do in the space at our disposal is to call attention to some of those points in which the treatment recommended is more or less at variance with that usually adopted. We must pass over altogether his special methods of examination (through-illumination and examination with two mirrors and prisms) as being unsuited for discussion in these pages.

In eczema at the orifice of the nose, Voltolini considers that the application of a solution of nitrate of silver (about 10 gr.

ad 3i) is the best method of treatment.

In deviation of the cartilaginous septum, the electric cautery, applied, if necessary, at intervals of from four to eight days, is recommended as yielding the most satisfactory results. The author states that in no case has he been obliged to burn through the bulging cartilage in order to secure sufficient breathing space. He ascribes the straightening which follows this operation to the effects of cicatricial contraction of the burn.

In perforating ulcer of the cartilaginous septum, Voltolini touches the margins with the electric cautery, and states that he has always succeeded in producing closure of the orifice. He lays special stress upon the fact that this affection is usually not associated with syphilis, and that as it never attacks the bone, no falling in of the nose is to be feared.

In chronic rhinitis the author does not seem to employ the electric cautery, and this is somewhat remarkable in one who introduced this method into rhinological therapeutics, and who advocates its employment so extensively in other affections.

In ozena the author rejects Gottstein's tampons as being contrary to surgical principles. In general, he employs only tar water internally and locally, often only the latter. This is prepared from wood tar as follows:—A pound of tar is placed in a shallow vessel, and over it is poured a quart of water. The whole is allowed to stand for from one to two days, and then filtered. The dose of this remedy recommended by Voltolini is a wineglassful for children and a tumblerful for adults, to be taken in the morning before breakfast. The same fluid is used as a nasal injection after all the secretion has been removed. Sometimes it requires to be diluted for patients in whom the full strength causes pain.

In his views on carcinoma the author is certainly at variance with accepted teaching. "Undoubtedly," he writes, "cures, even spontaneous cures, of cancer occur." Voltolini then goes on to state that he places more or less reliance on internal medication—Zittmann's decoction, Fowler's solution, and chloride of gold. Electrolysis is also advocated.

In operating on adenoid regetations the electric cautery is recommended as the most serviceable and safe method—an opinion with which we cannot agree.

The chapter on non-pharyogeal polypi (i.e., fibrous tumours) is extremely interesting. The author is strongly inclined towards the hypothesis, first suggested by Legouest and then substantiated by cases recorded by Gosselin and Lafonte, that these tumours may undergo spontaneous resolution, and that the tendency to cure increases as the patient approaches the age of thirty. In operating on fibrous polypi Voltolini advises the electric cautery, but usually in a modified form. Either the

electrolytic snare is employed (a piece of ivory let in between the wire), or the ordinary snare by a method which makes its action electrolytic. The latter consists in first thoroughly isolating the conducting tubes by the application of a solution of indiarubber or guttapercha in turpentine or chloroform; one electrode is then attached and the other placed in contact with the cheek by means of a sponge; finally, the current is turned on, and an electrolytic action of considerable rapidity ensues. In sessile growths needles and electrolytic forceps (described in the "Year Book" for 1888) are employed.

SUMMARY OF THE THERAPEUTICS OF

THE YEAR 1888-89,

CHIEFLY IN REFERENCE TO NEW REMEDIES.

BY WALTER G. SMITH, M.D., UNIV. DUBLIN,

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A RESTLESS activity continues to prevail in the domain of therapeutics. The number of new remedies annually proposed is somewhat bewildering, and scarcely leaves us time to master the nomenclature before the newcomers press forward and jostle their predecessors out of the way.

Each year, however, some residue of gain remains to add to

the store which is so slowly and laboriously amassed.

During the past year attention has been largely directed to drugs acting upon the nervous system, and upon tissue-change (antipyretics, analgesics, hypnotics), and to anti-mycotic remedies (antiseptics, germicides).

A good deal of notice has also been paid to such topics as gymnastics, massage, and hypnotism (hypnotic suggestion), but

our limits forbid a survey of so wide a field.

NEW BOOKS.

- 1. "A Text-Book of General Therapeutics. By Dr. W. Hale White. Macmillan. 1889."—A useful and well-written work.
- 2. "Vorlesungen über allgemeine Therapie. F. A. Hoffmann. 2te. Aufl. Leipzig."—Discusses the general principles of management of affections of the heart, lungs, kidneys, stomach, liver, intestines, skin, and muscular system, nervous system, the modes of influencing metabolism, and of controlling the production of heat.

3. "Schreiber's Manual of Treatment by Massage. Trans-

lated by Dr. Mendelson,"

4. We must not omit to remind our readers of Dr. Lauder

electrolytic snare is employed (a piece of ivory let in between the wire), or the ordinary snare by a method which makes its action electrolytic. The latter consists in first thoroughly isolating the conducting tubes by the application of a solution of indiarubber or guttapercha in turpentine or chloroform; one electrode is then attached and the other placed in contact with the cheek by means of a sponge; finally, the current is turned on, and an electrolytic action of considerable rapidity ensues. In sessile growths needles and electrolytic forceps (described in the "Year Book" for 1888) are employed.

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1. Anthrarobin.

This reduction product of alizarin was referred to in the "Year-Book" for 1889, p. 330, in connection with Behrend's favourable report of its use in diseases of the skin. It is less irritant than chrysarobin, and hence seemed worthy of trial. But Rosenthal and Köbner dispute its therapeutic value. Köbner prescribed it for twenty-four psoriatic patients, and found that not only did it cause smarting of the skin, but also its action was so slow and feeble that some patients who knew the efficacy of chrysarobin requested that it might be substituted for the anhrarobin. (Les Nouv. Rem., from Schmidt's Jahrb.)

2. Antipyretics, Toxic effects of.

- (a). Antipyrin.—All cases of poisoning by this drug are important, since from its undoubted utility, not only in fever, but also in neuralgias, it has become very popular. Tucsek has recorded a case in a boy nine years of age, to whom the drug was given to allay the paroxysms of whooping cough. The patient had never suffered from convulsions, rickets, or worms. The dose given was about seventeen grains daily in three doses for the space of three weeks. At the end of this period the patient was seized with vomiting, and passed into a state of somnolence, Rapid ensuing epileptiform spasms ending in deep sleep. followed, sometimes general, sometimes unilateral, accompanied with grinding of the teeth and jactitation, arhythmia of the cardiac beat, and dilatation of the pupils. A macular eruption appeared on the skin, and the temperature became subnormal. while the pulse was slow and tense. On the third day of poisoning, consciousness began to return, the convulsions diminished in severity, and ceased entirely on the fourth day. For a few days the child was depressed, but completely recovered. During the poisoning there were, as might be expected, no attacks of whooping cough, but afterwards the paroxysms returned with increased severity, and lasted for some months. (Brit. Med. Journ., June 29, from Berl. Klin. Woch., 17, 1889.)
- Dr. C. S. Purdon describes a case in which serious nervous symptoms with tremors ensued upon a single 5-grain dose of antipyrin. (Brit. Med. Journ.)
- (b). Antifebrin.—In a case of acute tuberculosis in a young man, 10 grains of antifebrin induced alarming symptoms. The temperature fell more than 6° Fahr., and the patient became

collapsed, and did not fully recover until next morning. (Brit. Med. Journ., Sept. 14.)

Somewhat similar results occurred in the practice of Dr. Meyer,

of Hildesheim. (Lancet, June 8.)

3. Benzanilide

(C₆H₅NH,CO,C₈H₅) is a white crystalline powder, sparingly soluble in water, soluble in alcohol. **Kahn** has employed this drug in a great number of febrile diseases in children. It is easily taken, and is well borne. As Cahn and Hepp have shown, benzanilide is an energetic antipyretic, acting similarly to acetanilide. The doses are 1 to 2 decigrams (1½ to 3 grs.) for children under three years of age, up to 9 grs. for older children. The maximum dose in twenty-four hours was 50 grs. Roughly speaking, the dose may be said to be twice that of acetanilide. (Les Nouv. Remèdes, from Schmidt's Jahrb.)

4. Chloralformamide (chloralamide).

Such is the title of a new hypnotic prepared by Schering, of Berlin, at the instigation of Prof. v. Mering. It is an addition-product of chloral anhydride (CCl₃CHO) and formamide (CHONH₂), and its formula is CCl₃CH $^{/OH}_{NHCHO}$.

It occurs in colourless crystals, soluble in 9 parts of water and 1½ part of alcohol (96 per cent.). The flavour is mild, feebly bitter, and not at all caustic.

Experiments on frogs and rabbits attested its hypnotic power, and, comparing it with chloral, the blood-pressure was found to be very slightly affected. Dr. Kny, of Strasburg, has tested the action of chloralformamide on man, having administered it 100 times in 31 cases. The dose varied from 1½ to 4 grams (22 to 62 grs.). Speaking generally, it is suitable to the same class of cases of insomnia as chloral. A larger dose is requisite, in the ratio of 3 to 2, and its action is somewhat slower, sleep coming on in from 20 to 40 minutes after administration—on an average, half an hour. The duration of the sleep varies from six to ten hours, and no unpleasant after-consequences are experienced.

Chloralformamide is so unirritating that a 10 per cent. solution causes no irritation when applied inside the eyelid of a rabbit; and it can be taken by patients in powder directly, or in wine, etc., without risk of offending or disturbing even a sensitive

stomach. A good vehicle is sweetened red wine.

The most striking advantage of chloralamide is this—that even in deep narcosis the circulation suffers no embarrassment, either central or peripheral.

Dr. Kny has also experimented with chloralacetamide, but with unfavourable results. (Therap. Monatsh., Aug., 1889.)

Drs, Hagen and Hafter consider chloralamide to be one of the

most reliable hypnotics. (Münch. Medic. Wochensch.)

Hagemann and Strauss carefully noted its action upon fifteen patients suffering from various diseases. They gave it in doses of from 1 to 4 grains, and conclude that it is a good hypnotic, which does not affect the circulation, and seldom disorders the stomach. Sometimes it failed to induce sleep. (Berl. Klin. Woch., No. 33,

5. Creolin (Liquor antisepticus, Jeyes')
Was noticed in the "Year-Book" for 1889, and seems to be gaining favour as an antiseptic and disinfectant, Pleskoff strongly recommends creolin in chronic rhinitis, ozena, and pharyngitis sicca. He uses a 1 per cent. solution. (Therap. Monatsh., Oct., 1888.) It is of practical importance to know that the assertion of its absolutely non-poisonous qualities is not borne out by further observations. It could, à priori, scarcely be expected that a powerful germicide, and one containing phenolic compounds, would be, as was stated, "at the same time harmless to higher forms of life." According to Biel and Fischer, creolin contains naphthalin, pyrocresol, paracresol, xylenol, phlorol, leucolin, anthracene, pyridine bases, and aromatic hydrocarbons. Its ash is rich in sodium and carbonate. (Cf. report on creolin by Dr. Lichtwitz, Nouv. Rem., Oct., 1888.) It appears to be a complex and variable mixture. Experiments have been made at Königsberg by Washbourn and Baumgarten, with the result that creolin is undoubtedly "a strong poison for the animal organism." Behring has arrived at a similar conclusion from his experiments on animals. In acute cases death was preceded by progressive weakness and clonic convulsions; in chronic poisoning, produced by a smaller quantity, albuminuria was observed, and, after death, evidence of chronic nephritis. The poisonous dose is relatively large; hence there is little danger attending its use in dressings. (Brit. Med. Journ., Feb. 2, 1889.)

Cramer, however, reports a case in point. A boy, aged five,

operated on for hernia, was dressed with gauze dipped in a 2 per cent. solution of creolin (Pearson's). Everything went well up to the evening of the third day, when a scarlatiniform rash appeared on body, face, and hands, but with no pyrexia. The urine smelt heavy, was dusky-coloured, like carbolic urine, and contained a little albumen. Boric lotion was substituted, and the patient quickly recovered. (Therap. Monatsh., Dec., 1888.) Two minor objections have been raised against creolin in surgical practicenamely, its solutions are so opaque as to conceal instruments in a tray filled with it, and it makes the instruments slippery.

J. Van Ackeren records a case in which a man swallowed 250 cm. of undiluted creolin with suicidal intent. He speedily became comatose, but ultimately recovered. (Berl. Klin. Woch., 32, 1889.)

6. Carbo-naphtholic acid (oxynaphthoic acid),

Recently investigated, adds another to the long list of antiseptics already known, but it is not so well adapted for use as creolin. (*Lancet*, June 8, 1889.) A solution in sodium phosphate is recommended. (*Cf.* Dr. Helbig, *Therap. Monatsh.*, Feb., 1889.)

7. Exalgin.

Under this empirical name, which refers to one of its uses ($\hat{\epsilon}\xi$; $\hat{\kappa}\lambda\gamma\sigma_c$, pain), MM. Dujardin-Beaumetz and Bardet introduce a derivative of benzine obtained by Brigonnet. Its formula is $C_0H_{11}NO$, and its chemical nature is expressed in the term methyl-acetanilide.

The physiological action of exalgin closely resembles that of antipyrin. While inferior to antipyrin as an antipyretic, it excels

it in analgesic power.

In this connection it is interesting to point out that many of the aromatic compounds are at the same time antiseptic, antipyretic, and analgesic in their action. One of these actions, however, usually dominates, and the predominance of a special physiological action seems to bear a relation to the chemical constitution of the compound. Thus antiseptic effects belong especially to the hydrates or alcoholic derivatives (phenol, naphthol, etc.).

Antipyretic action prevails in the amide derivatives (kairin,

thallin, and their acetyl derivatives, e.g., acetanilide).

Lastly, analgesic action is at a maximum whenever in an amide an atom of hydrogen is replaced by a molecule of a fatty hydrocarbon, and especially methyl (antipyrin, exalgin).

The dose of exalgin is 25 to 40 centigrammes (about 4 to 6 grs.) at once; or 40 to 75 centigrammes, taken in divided doses,

in the 24 hours.

All forms of neuralgia are relieved by this drug. The effects were extremely remarkable in neuralgias a frigore; they were much better marked than with antipyrin. In chronic sciatica, muscular rheumatism, and articular maladies, the action was less favourable, as might naturally be expected.

Exalgin is slightly soluble in cold water, but very soluble in water containing a little alcohol; hence it is conveniently

prescribed along with a tincture. (Répert. de Pharm., Avril, Mai; Nouveaux Remèdes, Juin.)

8. Glycerine suppositories.

As an alternative to glycerine enemata, which have come into considerable favour, Boas has proposed the employment of glycerine suppositories. Kroell (Therap. Monatsh., Nov.), of Hamburg, tested these suppositories in fifty cases, and with thoroughly satisfactory results. They usually act painlessly within from 5 to 15 minutes, and cause one abundant stool. The dose of glycerine for adults is 2 grains, for children ½ to 1 grain. The glycerine is contained inside a shell of cacao butter fashioned to the shape of a chassepot bullet.

The purgative action of glycerine is exerted on the large intestine; hence the employment of suppositories or enemata of glycerine is especially indicated whenever we wish to stimulate peristalsis of the large bowel.

9. Hydronaphthol

Is a derivative of β -naphthol, a molecule of HO (hydroxyl) being substituted for H. It occurs in white laminar crystals, is sparingly soluble in water (cold, 1 in 1,000; hot, 1 in 300), freely soluble in alcohol, ether, chloroform, glycerine, and the fixed oils. It is non-irritant and non-corrosive, and does not injure instruments. It may be prescribed in ointment or paste (from 5 grains to 3i. per oz.), or as powder mixed with starch, talc, etc., and in solution with glycerine or alcohol. Soluble tablets are also to be had from Seabury and Johnson, as well as soaps (1 and 5 per cent.). Hydronaphthol is an active germicide, but its relative powers are differently estimated by different observers.

Dr. C. Foote, Connecticut, contributes a paper on the value of creolin, hydronaphthol, and sodium fluosilicate as germicides, to the September number of the *Internat. Journ. Med. Scien.*, of which an abstract by Sir C. Cameron appears in the *Dublin Journ. Med. Scien.*, Oct., 1889.

10. Hydroxylamine.

The repeated suggestion of hydroxylamine, or oxyammonia (NH,OH), a base in which one atom of hydrogen of ammonia is replaced by the hydroxyl group, as a possible substitute for pyrogallic acid and chrysarobin in dermatological practice, presenting the advantage of not staining the skin, has led to the publication of some details respecting it for the guidance of pharmacists (*Pharm. Zeit.*, p. 659). The free base, only known in watery solution, is odourless and colourless. The most important salt is the hydrochlorate (NH,OH,HCl), which

occurs in well-formed, colourless, strongly hygroscopic crystals, freely soluble in water, glycerine, and alcohol. The solutions do not colour phenolphthalein; strongly redden blue litmus paper, but do not cause congo paper to turn blue. In testing for its purity, therefore, the blueing of congo paper would denote contamination with free acid. (*Pharm. Journ.*, Dec. 1, 1888.) The action of this body has been recently investigated by several experimenters. Raimondi and Bertoni have found that when injected into the blood of living animals (in the proportion of one centigramme to every kilogramme of body-weight in rabbits), it transforms the hæmo-globin into methæmoglobin, and this is confirmed by all subsequent observers. With larger doses than the one mentioned, the urine becomes bloody, owing to the destruction of the red corpuscles. In frogs, rabbits, and dogs, hydroxylamine, moreover, causes a general paralysis of the nerve centres; and in the latter animals it causes convulsions as well. The presence of methæmoglobin has nothing to do with the paralysis; it is still noticed when the narcosis has quite disappeared. (Brit. Med. Journ., Nov. 17, 1888.)

Binz, upon theoretical grounds, proposed the use of hydroxylamine in the treatment of diseases of the skin, and Eichhoff has experimented with it, and speaks enthusiastically of its virtues as a substitute for chrysarobin. (Monatsh. f. prakt. Dermat.)

11. Ichthyol.

Nussbaum's favourable results in the treatment of erysipelas by ichthyol were noticed in the "Year-Book" for 1888 (p. 263). Within the last year or so a number of communications upon the same subject have been published by Russian physicians (Biljeff, Sorokin. Preobrashensky. etc.), who speak in laudatory terms of the value of ichthyol applied externally in erysipelas, in the form of ointment, or lotion, or ichthyol collodion. (Allgem. Medicin. Central-Zeit.)

It is not easy to understand how it is that ichthyol can produce such wonderful effects as are claimed for it. Hoffmann and Lange, after three years' experience, are enthusiastic in its praise, and state they can quite confirm the results obtained by Unna. Zuelzer, and Nussbaum. (Therap. Monatsh., Mai, 1889.) Dr. C. McLean also praises it. (Brit. Med. Journ., March 9, 1889.)

12. Thiol

Is proposed as a cheaper substitute for ichthyol. It is obtained by the action of sulphur on coal tar oil. Thiol is soluble in a mixture of water, alcohol, and other. (Répert. de Pharm., Fevr.) The Berlin correspondent recommends the following

formulary in the *Provincial Medical Journal*, June 1st. Thiol is used for the same diseases as ichthyol:—

B. Thiol						 3j.
	• • •		•••	• • •		 31.
Lanolin						3j.
M. f. ungt.						
Sig.: For extern	nal us	e.				•
R Thiol sicc.		•••	• • •			 gr. ij.
Pulv. glycy	rrhiz	BD				 gr. ij.
Glycerin tra				 Q. B.		
M. f. pilula.	· .	_		_		_
Sig.: One pill t	o be t	aken ti	aree tir	nesa d	av.	
R Thiol sicc.						 3j.
Zinc. oxid.						 zij.
Amylum						 5j.
Talc						 Ŧij.
M. f. pulv.						 3-30

Sig.: The affected parts to be dusted with this powder.

13. Iodol. Internal use of.

Dr. Cervesato, of Padua, has administered iodol internally in cases of scrofulosis, respiratory affections, and tertiary syphilis. Its action is in general comparable with that of other preparations of iodine. The urine is sometimes coloured brownish. Iodol does not pass unaltered into the urine, but an increase of the iodides occurs. It is well tolerated, and does not cause iodism. Dose, 1 to 3 grams daily. (Berl. Klin. Wochensch., Jan. 14.)

14. Thio-resorcin.

The latest substitute for iodoform is a combination of sulphur with resorcin, discovered by Ewer and Pick, of Berlin, to which the name of thio-resorcin has been applied. It occurs as a powder, and is without smell, and entirely non-poisonous. It has been used as a dusting powder, and as an ointment made up with vaseline of the strength of from 10 to 20 per cent, for eczema, psoriasis, itch, and other skin diseases. It is insoluble in water, but sparingly soluble in ether and alcohol. In price it is about the same as iodoform. (Lancet, June 8.)

15. Methacetin.

This compound, the methyl homologue of phenacetin,* has

• The relations between antifebrin, phenacetin, and methacetin are easily seen:—

I.s., antifebrin is acetanilide; methacetin is oxymethylacetanilide; and phenacetin is oxyethylacetanilide.

been examined by Mahnert, of Graz. It is a crystalline powder, slightly reddish, odourless, possessing a weak saline and bitter taste, sparingly soluble in water, readily soluble in alcohol. Hence it appears that it is a more soluble body than phenacetin, with which it agrees in physiological action. It may be given to children to reduce pyrexia, in doses of 20 to 30 centigrams. (Répert. de Pharm., Juin, 1889.)

16. Morphine and codeine.

Dr. Mitchell Bruce's investigations into the comparative value of codeine and morphine were summarised in the "Year-Books" for 1888 (pp. 86-8) and 1889 (pp. 81-3).

Dr. T. B. Fraser, of Edinburgh, has also directed his attention to this point, and the conclusion he arrives at is that "the evidence seems to indicate that codeine is a less powerful remedy in diabetes than either opium or morphine, and to confirm the view that in its therapeutic value it ranks as a weak or diluted morphine.

"The conclusion receives an importance (no doubt a subsidiary one) from the circumstance that codeine is about three times as expensive a substance as morphine. The great demand for it has led to its being manufactured from morphine so largely that probably one-fourth of the codeine in the market is an artificial substance. When we consider the large doses that are required in diabetes mellitus, and the generally protracted duration of this disease, we are, I think, justified in asking for more clear evidence of its superiority over morphine than has as yet been produced." (Brit. Med. Journ., Jan. 19.)

17. Myrtol.

Dr. H. Eichhorst invites attention to this drug as a most efficient disinfectant for the air-passages. It is a limpid fluid, with an agreeable odour, and constitutes that portion of oil of myrtle (Myrtus communis) which boils at 160° to 170° C. Linarix, of Paris, published a monograph upon it in 1878, but it seems to have escaped notice. Eichhorst recommends it most strongly in cases of gangrene of the lung and putrid bronchitis. The remedy is conveniently administered in gelatine capsules, each containing 0.15 gram of myrtol. The action is sometimes very rapid, and it was often found that the offensive odour disappeared from the breath and sputum after but a few capsules were taken. (Therap. Monatsh., Jan., 1889.)

18. Nitrites.

An important series of contributions to the chemistry and pharmacology of the nitrites of the paraffin series has lately issued from the Research Laboratory of the Pharmaceutical Society. They are fully reported in the *Pharmac. Journ.*, Dec.

22, 1888, and are given in abstract in the Brit. Med. Journ., Dec. 22 and May 25.

(a). Ethyl Nitrite.—Spirit of nitrous ether of the British Pharmacopæia is a very complex preparation, and although it contains ethyl nitrite or nitrous ether, there are present in it other substances in varying proportion, the exact nature of which has not up to the present time been precisely determined. It has been advanced on the one hand that the therapeutic properties of what is popularly known as sweet spirits of nitre are due to the nitrous ether it contains, while on the other it has been stated that the value of the preparation actually depends upon the combination of substances produced by the pharmacopæial process.

Whatever may be the real truth with regard to this, it is to be noted with satisfaction that the therapeutic value of pure ethyl nitrite has been the subject of scientific investigation. We are indebted to Professor Leech for having drawn attention to the medicinal properties of a solution of the substance. He has found it of great value in the treatment of ailments connected with high tension, and that it prevents the onset of anginal attacks. He has also found it act remarkably well in the relief of dyspnæa, where with high tension the heart's power is beginning to fail, especially if brouchial spasm complicates the cardiac condition.

A solution prepared by Messrs. Woolley and Sons, of Manchester, contains 3 per cent. of pure nitrite of ethyl in absolute alcohol and glycerine. Although this solution as made is permanent, it decomposes quickly when in contact with water; hence it should be dispensed in the undiluted condition, and the quantity prescribed added to water immediately before administration. The dose of the solution is from 20 to 80 minims.

(b). Amyl Nitrite as commercially met with is known to be of variable and uncertain composition. Professor Dunstan and his co-workers, Messrs. Woolley and Williams, have recognised in good commercial samples of "amyl nitrite" the presence of isobutyl nitrite, a-amyl nitrite and β -amyl nitrite, and in an inferior sample there were also propyl nitrite and ethyl nitrite present. It was therefore determined to prepare specimens of these nitrites in a pure state, and hand them over to competent workers for comparative experiments as to their physiological action. Pure isobutyl nitrite was prepared, and a comparison of its action with that of a- and β -amyl nitrites was undertaken by Professor Cash, of Aberdeen. This investigation is still in progress; but, so far as it has gone at present, the results point to the unexpected conclusion that the isobutyl nitrite is the most

active constituent of the official "amyl nitris," or, at any rate, that it is more prompt in its action on the blood-pressure, pulse-rate, and respiration in small animals than a mixture of the two amyl nitrites. The probability of this conclusion is also confirmed by some results obtained by Dr. Lauder Brunton, who, in comparing the action of amyl nitrits, B.P., with that of a mixture of the amyl nitrites, found that the official preparation, which would have contained some isobutyl nitrite, produced the more marked effect on the human pulse-rate.

19. Paraidehyde.

Dr. J. Gordon, of Aberdeen, has made a careful pharmacological investigation on the action of paraldehyde, which confirms and extends the conclusions arrived at by Dr. Cervello, who intro-

duced the drug about six years ago.

Clinically, Dr. Gordon has found the drug highly serviceable in cases of insomnia without pain, as, for example, the sleeplessness accompanying heart disease, pneumonia, phthisis, etc. "The advantages of the drug as a hypnotic, to which group it distinctly belongs, depend on the following points:—(1). It is not a cardiac depressant. (2). It has no marked period of toleration, since in some cases of insomnia from overwork the drug has been taken in the same dose for some months with equally good hypnotic results. (3). No marked craving for the drug seems to be induced by its use. (4). It does not exercise, except in large doses, a hypnotic effect on a person not suffering from sleeplessness; hence there is no probability of its abuse. (5). It has not a marked period of excitement before the hypnotic action takes place. (6). Its action is speedy, patients generally falling asleep within ten minutes after its administration. (7). The patients may be aroused while under its influence without any disagreeable or confused sensations. (8). The sleep which it produces is tranquil and quiet, with diminished respirations; this slowing of the respirations in many pulmonary diseases is of distinct advan-(9). It is not liable to disorder the digestion. (10). In many cases it is generally laxative in its action.

"In only one of the cases in which I prescribed the drug was gastric disturbance noticed. This patient, who suffered from phthisis, complained of a feeling of flatulence, and a disagreeable

taste, as of pinewood.

"No loss of appetite followed its use in my cases, nor headache, nor thirst. The dose I found most serviceable for adults was from 45 to 60 minims. My method of prescribing it was to well dilute it with cinnamon water, adding a little syrup of tolu and compound tincture of cardamoms. Syrup of lemon is also an

agreeable combination with it." (Brit. Med. Journ., March 9. 1889).

20. Phenacetin.

The antipyretic properties of this drug were noticed in the "Year-Book" for 1889, p. 323. Dr. Dujardin-Beaumetz speaks very highly of it, and states that as an analgesic it outrivals its predecessors, antipyrin and antifebrin. Three phenacetins are known to chemists-viz., meta-para- and orthophenacetin. The first of these seems to possess no therapeutic "The ortho-phenacetin must be given in larger doses than the para-phenacetin. The medium dose of the latter is from 1.5 gramme to 2 grammes per day. These two salts seem to be devoid of toxic properties. They are powerful antithermics and very active analgesics, which ought to be substituted for antipyrin for the following reasons:—(a), Because they are nontoxic; (b), because they act in doses one-half smaller; (c), because they are one-half cheaper; (d), because, finally, there is no monopoly in their manufacture." (Brit. Med. Journ., March 7, 1889.) It is best prescribed in the form of a powder.

21. Pyrodin (hydracetin).

Under this name a new drug has been introduced, which has undoubted temperature-reducing properties of a high order, the practical application of which, however, is much interfered with by its toxic action. Pyrodin contains as its active agent acetylphenylhydrazin (C₆H₅N₂H₂C₂H₃O), a crystalline powder very sparingly soluble in water. According to the clinical and experimental observations of Dr. Dreschfeld, of Manchester, which have been confirmed by M. Lépine, of Lyons, pyrodin acts in the same manner as, but more powerfully than, antipyrin, antifebrin, and phenacetin; and it has also been used effectively in migraine and other forms of neuralgia, as in the lancinating pain occurring in locomotor ataxy (Lépine). Great caution, however, is required in its administration, as it is apt to produce jaundice, followed by anæmia and even more serious symptoms due to hæmoglobina mia. Milder toxic symptoms have occasionally followed the administration of acctanilid or antifebrin. and also of phenacetin; but as phenylhydrazin is a much more powerful poison than anilin, so also are the toxic properties of its acetyl compound much greater than those of acetanilid. In exceptional cases, and where other antipyretics have failed, it may be useful; but great caution should be used. Small doses only should be given, and at sufficiently long intervals to enable one to watch any toxic effects, with the first appearances of which the drug should be stopped. (Brit. Med. Journ., Dec. 29, 1888.)

Pyrodin is a powder, very sparingly soluble in cold water. The dose for children is 3 to 4 grs.; for adults, 8 to 12 grs. Dr. Guttmann advises much smaller doses (1½ gr. at most) for adults. (Berl. Klin. Woch., 20, 1889.)

Dr. Lemoine thinks highly of pyrodin, and especially recommends it in the pyrexia of tuberculosis. With doses of 5 centigrammes the temperature falls within an hour 1° to 2.5° C., and this antipyretic influence lasts for several days. It is also a powerful analgesic. He advises that a maximum of 10 or 15 centigrammes per diem be not exceeded, lest toxic symptoms should arise. (Nouv. Remèdes.)

Liebreich points out, according to a recent communication from Dreschfeld, that "pyrodin," so called, is a mixture of several substances, of which the active compound is acetylphenylhydrazin. Pure acetylphenylhydrazin (hydracetin) is four times stronger than pyrodin, and must be a dangerous substance to meddle with. (Therap. Monatsh., Jan., 1889; cf. Oestreicher, Berl. Klin. Woch., 1889.)

22. Saccharin.

Saccharin has been the subject of very contradictory statements as to its harmlessness or otherwise, and some of them at least were not free from the taint of personal interest. In view of the growing importance of this question, in consequence of the increasing use of saccharin for sweetening articles of diet, Dr. Thomas Stephenson and Dr. Woolridge have made a series of experiments for the purpose of determining whether this substance is poisonous when given even in excessive quantities, and whether it interferes with the digestive processes when used in moderation. They report (Lancet, Nov. 17, p. 958) on the first point that two grammes were given daily for five days to an underfed dog without any inconvenient results being observed, and that mice ate ad libitum food mixed with large quantities of saccharin without manifest influence on the health. In testing whether the antiseptic properties of the compound have the effect of stopping the action of organised ferments it was found that a 0.1 per cent. solution had no retarding influence on the peptic digestion; that a 0.25 per cent. solution slowed the process decidedly; and that a 1 per cent. solution greatly retarded it. But it is pointed out that 0.1 per cent. of saccharin is the sweetening equivalent of 30 per cent. of sugar, an impossible dietetic quantity. The diastatic solution of starch was not hindered by 2 per cent. of saccharin. The ammoniacal fermentation of urine was retarded when saccharin was taken or added to the urine after excretion. As experiments like the foregoing do not reproduce exactly the relations which would exist between the two factors in the stomach, experiments were made upon living animals, and it was found by post-mortem examination that the ingestion of a gramme of saccharin, equal in sweetening power to over eight ounces of sugar, had not in the least interfered with the digestion of a dog. The authors conclude (1), that saccharin is quite innocuous when taken in quantities largely exceeding what would be taken in any ordinary dietary; and (2), that saccharin does not interfere with or impede the processes of digestion when taken in any practicable quantity. To this they add their personal experience that saccharin may be taken for a considerable period without interfering with the digestive and other bodily functions. (Pharm Journ Dec 1 1888)

and other bodily functions. (Pharm. Journ., Dec. 1, 1888.)

Dr. E. Gans has arrived at similar conclusions as to the innocuousness of saccharin upon digestion. (Berl. Klin. Wochens., April, 1889.)

Dr. Attfield has published a pamphlet setting forth the services which saccharin may render to pharmacy, and giving a large number of formulæ, many of them representing pharmacopæial preparations, with saccharin substituted for sugar.

23. Sodium dithiosalicylate II.

Dr. H. Lindenborn, Frankfurt-am-Main Town Hospital, reports on this substance in a preliminary communication (Berl. Klin. Wochens., 25, 1889), and thinks that it is destined to supplement salicylate of soda in the treatment of acute articular rheumatism. The dithiosalicylic acids Nos. I. and II. are two isomeric bodies, each of which consists of two molecules of salicylic acid linked together by two molecules of sulphur. The acid is prepared by heating together salicylic acid and chloride of sulphur. No. II (sodium salt) is a greyish-white powder, very hygroscopic, and easily soluble without residue in water. According to Huppe, a 20 per cent. solution kills anthrax bacilli in forty-five minutes, in which time the ordinary salicylate has no perceptible effect; similarly with other bacteria. Four cases of polyarticular and one of monoarticular rheumatism were treated, also one of gonitis gonorrhoica complicated with irido-choroiditis; the dose was 0.2 gramme (3 grains) morning and evening - oftener in the more severe cases. The slighter cases showed disappearance of joint-swelling, pain, and fever in two days, the more severe cases in six days. One case was a relapse after salicylate treatment; nausea and noises in the ears were complained of, severe sweating occurred only when 0.8 gramme (12 grains) were taken pro die. The last-mentioned of the above cases was from another hospital, and the patient left cured in ten days. The advantages of this drug over salicylic acid are:—Stronger action, therefore smaller doses; tolerance by the stomach (the insoluble dithiosalicylic acid is precipitated from the sodium salt in an acid solution); and absence of unpleasant after-effects. (Brit. Med. Journ., July 27, 1889.)

Liebreich points out that the chemistry of this new claimant is not yet thoroughly understood. There are nine possible isomers. Which of them is the one alluded to above? (Therap. Monatsh., Juli, 1889.)

A sulpho-compound of salicylic acid was recommended several years since by Mr. John Williams (Pharms Journ. [3], vii., 280.)

24. Sozoiodol.

This product—manufactured by Trommsdorff, in Erfurt—claims to be an odourless substitute for iodoform. It is an iodine derivative of phenolsulphonic acid, and contains over 50 per cent. of iodine. It is prepared in the form of salts of potassium, sodium, zinc, and mercury. The sodium salt is the most soluble in water (7 to 8 per cent.), and appears to be unirritating.

A number of competent investigators (Fritsche, Lassar, etc.) have reported as to its efficacy, and it probably deserves a more extended trial in England, although we are now fairly well supplied with reliable antiseptics and deodorisers. It is unnecessary to particularise its applications to special conditions, and it is sufficient to state that it may be employed as a dusting powder, pure or mixed with tale; in ointments, with lanolin (one in ten); or in solution (2 per cent., and upwards). Sozoiodol gauze and cotton may also be had. In the Therap. Monatsh., Sept., 1888, Langgaard gives a full account of the chemistry of sozoiodol, with experiments which establish its active germicidal powers; and in the same journal, Jan., 1889, Nitschmann speaks highly of its utility in the treatment of wounds, burns, mucous catarrhs, and in gynæcological practice.

25. Sulphonal.

Many articles in reference to this drug have appeared during the past year, and the general verdict seems to be in its favour. But, like all drugs of similar action, it has its drawbacks. Engelmann (Therap. Monatsh., Nov., 1888) relates the case of a woman, aged 40, who, while menstruating, took 30 grains of sulphonal for insomnia. Sleep was not induced, and next morning there appeared a sharply defined scarlatiniform rash on the outside of each mamma. The eruption spread to the forearms, and over the chest to the epigastrium. A good

deal of itching attended the eruption, which began to fade away on the third day.

Dr. Schotten (Therap. Monatsh., Dec., 1888) also reports a case in which the exhibition of doses of 30 to 45 grains of sulphonal to a woman, aged 45, was followed by serious prostration and by a measly eruption.

Dr. Hay, of New Jersey ("A Clinical Study of Paraldehyde and Sulphonal," Internat. Journ. Med. Scien., July, 1889), found symptoms of poisoning (vertigo, diarrhœa, depression, etc.) in 18 per cent. of cases treated by sulphonal. He prefers paraldehyde for continuous use; but sulphonal acts satisfactorily in maniacal conditions. In the same journal (March, 1889) Dr. W. H. Flint reports favourably on the use of sulphonal.

A good summary by Dr. Leech of recent literature upon sulphonal will be found in the *Medical Chronicle*, Nov., 1888.

Dr. Conolly Norman (Dublin Journ. Med. Scien., Jan., 1889) has used sulphonal in about 30 cases of mental disorder, and expresses himself as well satisfied with it. It may be conveniently administered in the form of capsules or in compressed tabloids, 5 grains each. "To sum up the advantages which are claimed for sulphonal: in doses of 15 to 45 grains it produces a natural sleep, from which the patient awakes refreshed, and without any bad after-effects. It is without smell, and has an almost imperceptible bitter taste. Against the drug are its insolubility and its high price." (Brit. Med. Journ., April 27, 1889.)

26. Ural.

Under this title, Poppi (Nouv. Remèdes, Mai, 1889, from Wien. Med. Presse, 14, 1889) proposes as a hypnotic a compound obtained by dissolving urethane in chloral. It occurs in crystals, with a bitter taste, slightly soluble in water, more readily in alcohol. Poppi states that it is a more certain and more prompt hypnotic than any yet used. It does not affect the blood-pressure, and is not followed by injurious secondary effects. He has prescribed it with success in cardiac diseases, in mental maladies, and in hysteria. We have not sufficient information at hand to give further details.

INDEX TO AUTHORS QUOTED.

Abadie, 51, 151, 270, 272.
Abjos, 57
Ackeren, 303
Adams, 133.
Alexander, 56.
Alonzo, 112.
Alt, 273.
Aithaus, 50.
Anderson, 155, 259.
Angolucci, 272.
Anuandale, 163, 192.
Arsdale, 163.
Ashby, 180.
Attenburg, 147.
Attfield, 312.
Aune, 40.
Auvard, 237, 238, 252.
Aye, 38.
Ayes, 184.

Baidy, 84.
Banks, 190.
Bar, 252.
Baraduc, 74.
Barboar, 252.
Bardel, 61.
Bardet, 303.
Barduzzi, 258.
Barker, 287.
Barton, 27.
Barton, 27.
Barton, 27.
Barton, 27.
Barton, 24. 190.
Battle, 152.
Baumgarton, 150.
302.
Beelly, 177.
Behrend, 255, 300
Behring, 149, 302
Belleli, 25.
Benec-Jones, 89.
Bennett, 54, 243, 207.
Bordach, 60.
Bergeon, 31.
Bergmann, 150, 245.
Bernadski, 102.
Bernadski, 102.
Bernadski, 102.
Bernadski, 102.
Bernadski, 102.
Bernadski, 103.
Bernheim, 48, 52, 53, 54.

Berry, 268.
Bertoni, 305.
Bertrand, 135.
Besnier, 254, 257, 259.
Beuermann, 136.
Bibber, 25.
Biedert, 133.
Biel, 302.
Billeff, 305.
Billeff, 305.
Billeff, 305.
Billeff, 305.
Billeff, 305.
Bird, 170.
Bittman, 269.
Black, 101.
Blake, 43, 296.
Blanc, 238, 239.
Blocq, 49, 52.
Boas, 304.
Boock, 257, 258.
Boeckel, 150.
Boglan, 233.
Boldt, 223.
Bono, 372.
Born, 244.
Bottrich, 38.
Bouchard, 35.
Boucherd, 35.
Boundet, 82.
Bournville, 55.
Bourard, 54.
Bourrville, 55.
Bourard, 54.
Bourrville, 55.
Brandel, 140.
Brigonnet, 303.
Bristowe, 104.
Brower, 165.
Browner, 279, 280.
Brower, 16, 307.
Bruen, 22, 254.
Browner, 279, 280.
Browner, 196, 307.
Bruen, 22, 23.
Brunton, 52, 300, 359,
Brush, 66.
Bryant, 196.
Brownet, 196.
Brownet, 196.
Bruch, 384, 250, 253, 272.
Bufallini, 273.
Bull, 102.
Brunn, 217.
Butchiuskaia, 65.
Butte, 356.

Cahn, 301.
Caldwell, 141, 183.
Callias, 112, 146.
Calliseri, 147.
Cameron, 241.
Cameron, 241.
Cameron, Sir C., 304.
Cammann, 23.
Cante, 142.
Cantlie, 15.
Carpenter, 127.
Carr, 123.
Casuti, 61.
Cash, 398.
Casper, 199.
Castol, 28.
Cattani, 134.
Ceola, 60.
Cervesuto, 306.
Champneys, 241.
Chantenesse, 143.
Charcot, 49, 53.
Charner, 249.
Charpentier, 249.
Charpentier, 249.
Charlier, 249.
Chauffard, 78.
Chautard, 28.
Chautard, 28.
Chautard, 28.
Chennevière, 236.
Cheron, 14.
Cholewa, 279, 282.
Chopin, 106.
Churton, 137.
Claret, 65.
Clark, Sir A., 26.
Clarke, 197.
Clémens, 25.
Cohen, 142.
Coleman, 244.
Collies, 32.
Comby, 41.
Conca, 54.
Cornet, 28.
Cornet, 28.
Cornet, 28.
Cornet, 28.
Cornet, 28.
Cornet, 29.
Coursserant, 274.
Cousins, 25.
Courandock, 112.
Cranddock, 118.
Cramer, 392.
Cripps, 137.

Critchett, 275. Critzman, 28. Cullingworth, 248. Curschmann, 79. Cutter, 214. Czerniewski, 246. Czerny, 222.

Dakin, 130, 251.
Dakin, 130, 251.
Dalby, 290.
Dale, 16, 57.
Dana, 58.
Darier, 255.
Darlington, 23.
Davy, 169.
Debove, 108, 112.
De Dominicis, 111,
Dehenne, 270.
Delie, 282.
Demieville, 71, 94.
Demme, 129.
Descroixilles, 123.
Descroixilles, 123.
Descroixilles, 123.
Descroixilles, 123.
Detweiller, 26, 88.
Dickinson, 13
Diday, 210.
Didier, 55.
Pobradin, 93.
Dochmann, 37.
Doderlein, 246.
Dodge, 23.
Doc, 219.
Dohru, 244.
Dolerin, 236, 239, 249.
Donald, 240.
Doutrelepont, 260.
Dowse, 61.
Drapes, 65.
Dresconfeld, 135, 310.
Drysdale, 210.
Drzewiecki, 41.
Dubousquet Laborderio, 122.
Duckworth, Sir D., 103, 159.
Duenas, 23.
Duchanin-Beaumetx, 6, 60, 98, 100, 103, 131, 303, 310.
Dumolard, 142.
Duncan, 165.
Duncan, 165.
Duncan, 165.
Duncan, 165.

Harris, R. P., 233,

942

242.
Harrison, 197 204, 205, 270.
Hart, 241, 242.
Horter, 54.
Hartge, 138.
Haslum¹, 258.
Hatch, 190.

Hatch, 190.
Hauser, 123.
Hay, 314.
Hebra, 290.
Hegar, 222, 227, 228.
Hehner, 57.
Helbig, 303.
Hellström, 133.
Henoch, 180.
Henry, 137.
Hepp, 301.
Hérard, 28.
Herman, 350.

Hérard, 28. Herman, 250. Hesaler, 284. Hower, 252. Howetson, 280, 286. Hick, 139. Hicks, 240. Higgins, 288. Hiller, 85. Hiller, 85. Hoffmann, 299, 305.

Hirst, 522.
Hodsdon, 167.
Hoffmann, 299, 305.
Hofmeister, 264.
Hegerstedt, 9.
Holst, 11.
Holt, 124. 169.
Hooker, 15.
Houchard, 101.
Houze, 36.
Huchard, 6, 7, 11, 40, 57. 105.
Hugen-chmidt, 54.
Humphreys, 134.
Hunter, 103.
Hupple, 312.
Hurry, 252.
Hutchinson, 210.

Duncan, Matthews. 243. Dunn. 23. 59. Dunstan, 308. Duquesuel, 66. Duret, 189. Dusch, 133.

Earle, 190.
Eberbart, 244.
Ebetein, 113, 255.
Eckerlein, 244.
Eddington, 149.
Edwards, 132.
Eeden, 53.
Egasse, 98, 101.
Eichboff, 263, 305.
Eichborst, 35, 307.
Elischer, 228.
Fllenberger, 264.
Eloy, 41. Filenberger, 284. Eloy, 41. Emmert, 273. Engelmann, 64, 313. Erb, 109. Eulenberg, 15, 51. Ewer, 306.

Fabry, 265. Falaschi, 241. Falkin, 154. Farr, 111. Fasola, 232. Feeny, 100. Fehleisen, 162. Fehling, 244. Feltz, 96. Fenwick, 207. Féré. 56. Fenwick, 207. Féré, 56. Feret. 173. Ferreira, 120. Fervers, 132. Fevrier, 14. Fichtener, 107. Fieandt, 26. rieandt, 250, Field, 250, 257, Finlay, 46, Fischel, 224, Fischer, 62, 65, 154, 174, 302. 174, 302. Fisher, 84. Fisher, 59. Flasher, 75. Flint, A., 32, 58, 64, 112. Flint, W. H., 314. Fontain, 53. Foote, 149, 304. Forcheimer, 133. Forlanni, 41. Fort, 164. Fort, 164. Fournier, 210, 213, 260 Fowler, 153. Fraenkel, 291. Fraentzel, 17. Franks, 158. Francer, 96, 307. Freund, senr., 227. Fritsche, 312.

Frommel, 222. Funk, 254. Funk, 234.

Gairdner, 92.

Galezowski, 272.

Galezowski, 272.

Galezowski, 272.

Galezowski, 272.

Galezowski, 272.

Galezowski, 262.

Garnod, 8ir A., 86, 109, 113.

Garson, 198.

Gasparini, 69, 273.

Gassecourt, 142.

Gaucher, 23, 140, 142, 144.

Gayet, 276.

Geay, 140.

Geddings, 26.

Gerhardt, 74, 260.

Gibbs, 141.

Girard, 71, 94.

Girard, 75. Glax, 75. Goetz, 27. Goldschmidt, 102. Goldvug, 143. Golddammer, 80. Goldammer, 80.
Gompers, 283.
Goodhardt, 59, 63.
Goodhardt, 59, 63.
Gordon, 309.
Gorecki, 52.
Götze, 137.
Gowers, 208, 209.
Graten, 170.
Gray, 54.
Gregory, 9.
Greve, 258.
Griffith, 44.
Grossman, 52.
Grossman, 272. Grossmann, _ Grun, 57. Grunert, 39. Grunhut, 273. Grossmann, 272. Grüning, 2 Gubler, 92. Guipen, 92. Guipen, 146. Guttmann, 134, 135, 145, 311. Guye, 291. Guyen, 204, 205.

Hack, 269 Hafter, 302. Hagemann, 302. Hagemann, 302, Hagen, 302, Hagenbach, 161, Hatin, 214, Haig, 106, 117, Hallopeau, 216, 260, Hammond, 51, 96, Hanna, 84. Hardy, 258. Hare, 8, 13, 154. Harlan, 275. Harlingen, 255. Harris, J. D., 45.

Ignatjew, 102. Illingworth, 139. Inge, 215. Isaac, 263. Ivanoff, 277.

Jacroud, 28, Jackson, 200, Jacob, 139, Jacobi, 4, 99, 125, 129, 133, 144, 147, 218, Jacobson, 275. Jacobson, 275, James, 46, Jendrassik, 101, 102, Jessop, 44, 88, 157, Joal, 294, Johnson, G., 91, Jones, E. L., 59, Jullien, 210.

Kafemann. Kahn, 119, 301, Katz, 285. Kauffmann, 76. Raufman, 76.
Keating, 180.
Keetley, 193.
Keith, 220, 222.
Keller, 125.
Kewin, 28.
Kevin, 68.
Keyes, 203, 210.
Kien, 152.
Kierusn, 12.
King, 278.
Kinnicutt, 162.
Kirk, 183. Kirk, 136. Kisch, 65. Klebs, 114. Klemperer, 40, 71. Klotz, 222. Klotz, 222. Knapp, 153, 155. Kny, 301. Köbner, 300. Koch, 220. Kocher, 162. Koerner, 284. Kohlschütter, 29. Konrad, 65. Krafft-Ebing, 54. Kragge, 127. Kraske, 256. Kraus, 127. Krauss, 65 k reiger, 162. Kretschmann, 281. Kroell, 304. Kroenlein, 158. Krull, 30. Kurshinsky, 73. Kustner, 222, 244.

Laborde, 6, 66, Lagrange, 271, Laker, 283, Lancereaux, Landerer, 37, Landolt, 268, Lane, 173, Lane, W. A., 156, Lauge, 305. Langenard, 313. Lans ton, 1/9. Larat, 82. Lassar, 211, 260, 263, 313. La Torre, 243, Laueustein, 162, 256. Lavanne, 165. Leber, 277. Lécorche, 108. Lee, 209. Leech, 308, 314, Lees, 155. Lefebvre, 237, Le Grand, 132, Legroux, 57. Leidy, 136. Leishman, 252

Lemoine, 311 Lendon, 188. Leo, 107, 124. Leopold, 220, 222, 241, 247. 221. 222, 241, 247. Lepag., 231. Lepine, 134, 135, 310. Leplat, 274 Lesser, 219, 255. Lesser, 219, 255. Leubuscher, 122. Leuf, 133. Levascheff. 8 Lewentaner, 120. Lewentaner, 12 Lewin, 263. Lewtas, 165. Leyden, 77, 93. Lichtnitz, 281. Lichtwitz, 302. Liébault, 52. Liebreich, 311, 313. Lilienfeld, 57. Linarix, 307. Lindenborn, 312. Lindenborn, 312, Lindfors, 250. Lindsay, 97. Little, 172. Lloyd, 44, 150, 156. Loewe, 283. Loewenberg, 279. Löftler, 144 Löfiler, 144. Lojacono, 64. Loomis, 95. Love, 119. Loviot, 240. Lowndes, 209. Lubinski, 57. Lumbroso, 110. Lund, 168. Luton, 138. Macewen, 172, 281,

Macewen, 172, 281, 287, Mackay, 240, Mackenzie, G. H., 27, 28, Mackenzie, S., 94, Mackey, 34, 46, Maddox, 268, Magruder, 16. Mahnert, 69, 135, 907. Mahomed, 100. Mahomed, 100. Mairet, 64. Makins, 155, 202. Man, De, 87. Marshall, 49. Martell, 37. Martin, 225 Martineau, 98. Mason, 65. Mayo, 139. Mays, 36, 40. McGill, 196. McGill, 196. McKeown, 276. McLaury, 58. McLean, 305. Meigs, 83. Mendel, 51.

Page, 155, 164, 185. Pajot, 252. Palmer, 45, 200. Panas, 99. Park, 272. Mendelson, 299. Menderson, 282. Menière, 283. Merck, 274. Mering, 301. Mermann, 246. Meyer, 233, 272, 234, 301. Park, 272.
Parker, 13.
Parker, 13.
Parker, R., 154.
Parrot, 58.
Parrott, 112.
Paschoud, 65.
Paton, 101.
Pavy, 90.
Péan, 155.
Pepper, 75.
Percival, 128.
Petregoux, 64.
Peterseo, 196, 198.
Peterseo, 24.
Pever, 71. 901.
Meyjes, 77.
Mickle, 12.
Mikulica, 150.
Miquel, 37.
Mircoli, 8, 107.
Misrachi, 251.
Mitra, 264.
Moizard, 131.
Moll, 53.
Moucoryo, 123. Moncorvo, 123, Moneoryo, 123, Money, 73. Montaz, 163. Montefusco, 138. Morano, 271. Morgan, 156. Petresco, 24. Peyer, 71. Peyer, A., 107. Pfalz, 268. Pfaifter, 114, 117, 128. Philips vich, 36. Philips, 234, 238, Pick, 306. Pilliet, 107. Morpurgo, 280. Morton, 50. Motschowkowsky, Pilliet, 107.
Playfair, 223, 252.
Pleskoff, 302.
Pollock, 115.
Polyak, 27.
Pope, 7.
Pope, 7.
Popet, 66, 314.
Porak, 236.
Postempski, 16 Moure, 286, 289. Moure, 286, 289. Muxniery, 276. Mulhall, 293. Muller, 63, 252. Muller, 17, 59, 277. Munchmeyer, 227. Munde, 228. Muret, 75. Musrachi, 134. 160. Potain, 42, 84. Poten, 248. Pratt, 30. Preller, 61. Natier, 281 Naunyn, 122. Nesterovsky, 255. Netter, 26. Neumann, 210, 215, Preobrashensky. Preuschen, 253, Pritchard, 280, Prochownick, 220, Prout, 89. 9601 Newman, 294, Nicolsi, 38. Niemeyer, 93. Nilsen, 162. Nitschmann, 313. Purdon, 300. Purdy, 139. Purgesz, 281. Pye-Smith, 92. Norman, 64, 314. Nothnagel, 81, 101. Nucl, 274. Nussbaum, 305. Quincke, 167. Quinquaud, 216, 259. Obersteiner, 62 O'Callaghan, 160. Oertel, 93, 147. Oestreicher, 311. Rachel, 122. Rake, 264. Olshausen, 222, 233, Ramondi, 305. Ralfe, 89. Raife, 89. Bansome, 36. Raymond, 49. Bebeiro, 143. Beimschneider, 124, 241. Opensovsky, 45. Opie, 210. Ord, 111. Ord, 111. Ortega, 54. Ory, 138. Ossorski, 85. Otto, 246. Otto, 64. 133 Remak, 51.

Renant, 105. Henterghem, 53. Henton, 168. Rentoul, 252. Henzi, 51.

Owen, E., 44. Owen, S. H., 132.

Rethi, 290. Ribes, 234. Rice, 191. Ricedel, 182, 256. Rifat, 184. Ritter, 96. Rivadeneyra, 77. Roberts, K. L., 255. Roberts, Sir W., 67, 118. 118.
Robin, J. T., 137.
Robin, M. A., 100.
Robinson, 254.
Robinson, B., 24, 31.
Robledo, 93.
Robson, 153, 165, 198, 905. 205. Rolleston, 23 Romanelli, 139. Rosenbach, 81, 255. Rosenbeim, 77. Rosenthal, 33, 263, Rosin, 63. Rossenbach, 107.; Rossenbach, 233. Rotch, 133. Rothe, 122. Roulin, 147. Bouvier, 251. Roux, 144. Ruault, 296. Ruff, 37. Rumboll, 139. Rumpf, 134. Runeberg, 167, 217. Ruschewegh, 65. Rütimeyer, 33. Saalfeld, 265. Saalfeid, 200. Sachs, 65. Salgo, 63. Sänger, 222, 227. Santini, 54. Santos, 231. Santos, 231. Satterthwaite, 24. Satterthwaite. 24. Saubotine, 42. Saundby, 50, 92, 98. Saville, 61, Schatz, 225. Schering, 301. Schetelig, 117. Schiff, 256 Schiff, 256 Schimm-Busch, 279. Schmid, 150. Schmidt, Rud., 264. Schöler, 277. Schotten, 61, 314 Schreiber, 92, 174, 2369. 299. Schrenck - Notzing, 54. Schroeder, 225. Schultze, 243, 253. Schütz, 250. Schwalbe, 63. Schwass, 77. Schwimmer, 258, 264.

THE YEAR-BOOK OF TREATMENT.

Sehrwald, 136.
Seibert, 124.
Seis, 38.
Seis, 38.
Seilden, 141.
Semmola, 77, 92.
Semon, 294.
Senn, 150, 153.
Serre, 41.
Sexetre, 184.
Sexton, 290.
Sezary, 40.
Shakowski, 121, 139.
Sheld, 290.
Shield, 290.
Shield, 290.
Shield, 290.
Shield, 290.
Sichel, 277.
Siebenmann, 284.
Sielaki, 296.
Sigard, 53.
Silex, 21b.
Silva, 101.
Simon, Jules, 144.
Skene, 220.
Skutsch, 26.
Smith, 64, 167.
Smith, A. H., 24.
Smith, 21. L., 4.
Smith, S., 34.
Smith, S., 34.
Smith, S., 34.
Smith, S., 34.
Smith, S., 35.
Solis-Cohen, 116.
Solly, 210.
Sonnenberger, 122.
Sorokin, 305.
Spaeth, 232.
Spencer, 165, 236.
Spiegelberg, 252.
Stachiewicz, 34, 293.
Stacke, 284.
Starck, 132.
Starcki, 32.
Starckia, 61.

Steinach, 60.Steinach, 60.Stephenson, S11.
Stern, 266.
Stockman, 151.
Stone, 280, 283.
Strahan, 352.
Stukowenkow, 216.
Sturgis, 128.
Swann, 139.

Tait, 220, 224, 229, 232, 241, 252.
Tarnier, 239.
Tarnier, 239.
Tarnier, 239.
Tarnier, 239.
Tarnier, 246.
Tarnier, 255.
Thompson, H., 198.
Thompson, 156.
Thompson, 156.
Thompson, W.H. 23.
Thompson, W.H. 23.
Thompson, W.H. 23.
Thompson, W.H. 20.
Thompson, J., 120.
Thompson, W.H. 20.
Thompson, J., 120.
Thompson, J.,

Steell, 3. Steffeck, 246. Steffen, 19. Stein, 202. Steinach, 60. Trastour, 109.
Trendelenburg, 196, 198, 202.
Trend, 252.
Treves, 158, 161.
Trommsdorff, 313.
Trouseeau, 269, 272.
Trudeau, 28, 30.
Trudey, 53, 54.
Tuezek, 300.
Tullio, 38.
Turnbull, 285.
Tuttle, 232.
Ughetti, 112
Unna, 254, 261, 305.
Valieri, 56.
Valieri, 56.
Valude, 269,
Valzah, 68.
Valude, 271.
Vertoogen, 65.
Vignal, 272.
Villemin, 97.
Virchow, 271.
Vogel, 102.
Voisin, 54.
Voltolini, 292, 296.
Vriese, 274.

Wagstaffe, 198.
Waibel, 40.
Waidy, 1·3.
Waiker, 160.
Waiton, 110.
Washbourn, 302.
Watson, 197
Watteville, 50.
Waugh, 105.
Waxham, 290

Webb, 44.
Wecker, 268.
Weir Mitchell, 51, 55, 156, 147.
Weiis, 126, 130.
Weise, 147.
Wells, SirS., 44, 210, 225.
Werth, 228.
Wettherll, 64.
White, 211, 258.
White, W. 156.
White, W. H., 20, 61, 259.
Whitehead, 199.
Whitehead, 199.
Whitehead, 199.
Whitle, 55.
Wicherkiewicz, 270.
Widal, 143.
Williams, J., 308, 313.
Williams, J., 308, 313.
Williams, W., 166.
Wirkowski, 78.
Wolfermann, 179.
Wolff, 185.
Wood, 55.
Wood, 55.
Woodley, 308.
Woolridge, 311.
Worrall, 65.
Wright, 180, 182.
Wyeth, 180.

Yates, 123. Yersin, 144. Zakbarevitch, 47 Zerner, 64, 78. Ziemssen, 131. Zinsstag, 248. Zuelzer, 305. Zweifel 231.

INDEX TO SUBJECTS.

PAGE	PAGE
Abdominal section for penetrating wound 160	Bucillus tuberculosis, Influence of crimate on 27
Abscess of lung and empyema, Sur-	Baldness, Treatment of 25
gical treatment of 43	Balsam of Peru in phthisis 37
, Incision and drainage in 45	Bandaging the ear, New method of 28
Acetanilide, Results of use of 119	Barium chloride in heart disease
Acne vulgaris, Treatment of 263	Bath, Mineral waters of 118
Acute intuseusception 192	Benzoate of soda in diphtheria 110
— yellow atrophy of liver 79	and naphthol in typhoid 137
Agaricin in night sweats of phthisis . 38	Bladder, Extroversion of 22
	Blepharospasm, Treatment of
Ague in children 120 Albuminuria 89	Bilious attacks in neurotic subjects 73
Albuminuria 89 —, Diet in 92 — in pregnancy and labour 233	Boils in external meatus, Etiology
in management and labour 923	and treatment of 279
Milk diet in 93	Boric seid in otorrhou 281
	Breech presentations, Dangers of
Alpine winter climates in phthisis 26	
Alpine winter climates in pitchicia 20	
Ansemia of children, Chloride of so- dium injection in 130	Bright's disease, Hydrochloric acid in 91
dium injection in 130	Bronchiectasis treated by incision
Anssthetics, Local 60	and drainage 4e
Angular curvature 173	Bronchitis, Terpine in 123
Ankylosis 172	
Antipyretics 119	
Ansethetics, Local 60 Angular curvature 173 Ankylosis 172 Antipyretics 119 — Toxic effects of 380	
	Cactus graudiflorus in cardiac affec-
-, antifebrin, and phenacetin in phthisis 33	tions
phthisis 33	Casarean section 24 in elongation of cervix 24 Caffeine in pleurisy 44 Calculi, Vesical, in boys 18 Calomel as a diuretic 101 —, Diuretic action of 108 Fatal results of subcutaveous
as a uterine sedative 236	in elongation of cervix 240
in diabetes 99	Caffeine in pleurisy 41
in diphtheria 143	Calcult, Vesical, in boys 18
in renal calculus 105	Calomol as a diuretic 101
in spasmodic cough 23	—, Diuretic action of 10:
Antiseptic douches, Value of, in lying-	-, Fatal results of subcutaneous
in period 248	injections of 217
- midwifery, Practice of 248	—, Heroic doses of, in pneumonia 22 — in phthisis
Antiseptics in aural surgery 280	—— in phthisis 37
	Cancer, Colectomy for 159
Anthrarobin 300	of rectum, Treatment of 157
Arsenic and lithium in diabetes 98	Cancrum oris, Perchloride of moreury
Articular rheumatism, Chronic 109	locally in 12
Artificial membranes 285	Carbolic acid and camphor in diph-
Artificial suckling 250	theria 14:
Artificial suckling 250 Ascites 75	
Aspiration and drain use of pulmonary	in treatment of fever 13
ab-cesses and cavities 168	theria 14:
Asthma, Antipyrin in 22	Carbo-naphtholic acid (oxynaphthoic
	acid) 100
- Moncorvo's experience of cases	Carcinoma, Laryngeal treatment of 291
of 123 i	Cardiac diseases of children, Str. ph-
, bronchial, Pathology and treat-	anthus in 125
ment of 23	— distress, Paraldehyde in 12
Aural surgery, Antiseptics in 280	— failure, Nux vomica in

Cardiac sedatives 11	Deafness, Syphilitic 285
therapeutics, Non-medicinal12	—, Treatment of, by injections of
—— tonies 5	pilocarpin 237
Cardio-vascular diuretics 6	Depressed nipple, Kehrer's operation for 250
Caries of cervical vertebras 174	Diabetes, Antipyrin in 99
Castration, Early, in tubercular dis-	Gymnastics in 98
ease of testicle 203 Cataract extraction, Intra-ocular	—, Infantile 99 —, Jambul in 100
lavage after 276	Diarrhosa, Infantile 124
Treatment of 2/5	, tubercular, Lactic acid in 40
Catarrh, atrophic, and ozena, New method of treating 296	— of the tuberculous 84 Diet in albuminuria 92
- of median recess of naso-pharynx 295	Digitalis in fevers 136
Catheter life, confirmed, Treatment of 199	— in heart disease 7
Cervical vertebree, Caries of 238 Cervical vertebree, Caries of 174	—, Large doses of, in pneumonia 24 Dilatation of stomach 74
Chalazion, Pathogeny of 2/1	Diphtheria, Ablation of membrane in 142
Chloral, External use of, in phthisis 38	—, Antipyrin in 143
Chloralformamide (chloralamide) 301 Chloride of hydroxylamin 265	—, Antiseptic cauterisation in 142 —, Benzoate of mercury in 140
Chloroform in pneumonia 25	Carbolic acid in 140
Cholers infantum, Chloride of sodium	and comphor in 149
injections in 126 Chorea 57	—, Cyanide of mercury in 141 —, Eucalyptus oil in 141
Climate, Aseptic, without altitude 26	Faradism in 140
, Influence of, on bacillus tu-	—, General treatment of 144 —, Hydronaphthol, papsin, and hy-
berculosis 27 Cicatrices of small-pox, preventive	droebloric acid in 141
treatment 138 I	Importance of local treatment in 144
Circulatory System, General thera-	, Resorcin in 142
peutics of 1 Cirrhosis of liver 77	—, Surgical treatment of 183 —, Tincture of iodine in 143
Club-foot, Operative treatment of 168	, Thymic acid in 142
Cocaine in asthma 23	Diphtheritic bacillus, Cultivations of 144
of 181	— paralysis in children 121 Dislocation of hip, congenital, Opera-
in morphinomania 62	tive treatment of 173
in middle car, Cerebral symptoms	, old unreduced, of femur, Treat-
after 282 —, Safeguards in use of 150	ment of 152 Diuretics, New vegetable 101
in variola 138	Dysentery 81
Codeine, a substitute for morphine 62	Dysentery 84 —, Treatment of
v. morphine in diabetes 97 Cold air in hamoptysis 38	Dyspeps a 67 — of nephritis, Hydrochloric acid in 71
Colectomy for cancer 158	—, Neurotic 71 —, Tuberculous 71
Compressed air in phthicis 41	—, Tuberculous 71
Constinution, chronic, Treatment of, by galvanism 86	Dysphagia, Resection of styloid process in 290
- of children, Glycerine enemata for 127	
Convulsions of children, Sulphide of calcium in 127	
calcium in 127 Craniotomy, Methods of 240	
Creation, interior and injurial	Ear-drum of celloidin 285
of, in phthisis 34 ——and iodide of potassium in phthisis 33	Eczems in childhood, Pathology and
— and iodide of potassium in phthisis 33 — in phthisis 31	treatment of 256
Creolin in treatment of otorrhosa 281	Electricity in gynecology, Estimate of 223 —— for uterine tumours 222
, antiseptic and antiparasitic in	Electrolysis for granulations or polypi
intestinal canal 85 — (Liquor entisepticus, Jeyes') 302	of middle ear 283
in ophthalmic disease 272	— in surgery 164 Empyema, chronic, New operation for 43
Croup, Intubation of larynx in 290	- Resection of rib and iodoform
, Oil of turpentine in 120 Curette in pue peral fever 249	
Cyanide of mercury in diphtheria 141	
Cysts of the pancreas 163	Ephedrin and pseudo-ephedrin 274
Deafness, Progressive tenotomy of	Ephedrin and p-eudo-ephedrin 274 Epilepsy 55

INDEX TO SUBJECTS.

Hamiltonia Manatament of	. 255		251
Erysipelas, Treatment of Eserine in the treatment of corne	po 1	Hare-lip and cleft-palate, Early opera-	
ulcers	275	tions for	185
Eucal, ptus oil in diphtheria	141	nead Operations on	153
Eustachian tube, Bougieing the, Dilatation of	233	He.dache due to syphilis, Treatment	
— — , Dilatation of — — , New instrument for app		Recurrent, of children	
ing remedies to	283	Heart disease. Barium chloride in	
Exalsin, Physiological action of	303	— — Digitalis in, in children — — Therapeutics of	
Excision of both hip-joints	152		4
— of joints, Primary union after — of spleen	162	Belleborin as an ansesthetic	000
— of spleen Exophthalmic goftre	56	Hernia	164
External auditory canal, Otomycol	sis	— of umbilical cord, Treatment and	
Of	284	prognosis of	250 152
Extirpation of pregnant canceron uterus	231	Hot air in phthisis	29
-, Partial, of ovaries and tubes	225	Hydatid of lung, Suppurating, treated	
, total, of uterus, Results of	227	by aspiration	. 45
Extraction of lens with capsule	275	Hydramnios, Abdominal puncture of	001
Extra uterine gestation Extroversion of bladder	232	uterus in Hydrocephalus, chronic, Value of	231
Extroversion of bladder	202	aspiration in	100
		Hydrochloric acid in Bright's disease	
Face presentations, Rectification of	f 240	Hydrofluoric acid as a germicide	. 28
Falkenstein in phthisis	26	——— in phthisis Hydrogen sulphide injections in	
Fulsetto voice, Cure of	293	phthisis	30
Faradism in diphtheria	140	Hydromaphthol, Chemistry of	
Fibroid, intramural, Apostoli's tre	224	, papain, and hydrochloric acid in	
Fistula, Perineal urinary	201	diphtheria Hydro-nephrosis relieved by position	. 141 . 103
Flap-splitting operation, for lacerat	ted	Hydroxylamine, Chemistry of	
perineum	228	Hydroxylamine, Chemistry of Hygienic school desks and forms	170
Flat-foot Foreign body in a bronchus	169 185	Hyperæmia, Painful, of tympanum	
Fractures of neck of femur	153	Hypnotics	. 63 . 52
of patella, Treatment of	153	Hypnotism Hysteria	. 55
		Hystero-myomectomy, New method	l
Call bladden Onemations of	164	of performing	225
Gall-bladder, Operations of stones	164		
Gastric ulcer	74	Ice in pneumonis	. 26
Gastro-intestinal derangement, Sa	lol		
in	123	Icterus of children, Faradic current	t
Genu valgum Germicides, Influence of, on tuber		In 190	. 127
bacillus	28	Incontinence of urine 190 Infantile diabetes	, 204 . 99
Glycerine suppositories	301	— diarrhœa	124
Gouty diathesis	113	Inferior dental nerve, Division of	
Gouty state, Test of	116	Inflammation of mastoid cells, treat	
Gouty state, Test of Granular lids, A powder for	270	ment without opening antrum Innominate artery, Ligature of	
Granulations of middle ear, El	ec-	Intermittent fever and suckling	. 2 51
trolysis for	283	Intestinal Obstruction	. 79
Graves's disease, Incomplete, after moval of nasal polypi	294	Intracranial lesions, the result of aura	
————, Treatment of	15	disease	. 287 . 290
Guafine, a new antipyretic	135		. 193
Guaiscol in phthisis	33	Iodide of mercury in phthisis	. 37
Gymnastics for diabetes Gynecology, The manual treatment	98	of pota-sium in syphilis	. 212
OJ ECCOTORJ, I DO HINDUM GRACIDAN		in syphilis	010
		Iodides, Diagnostic value of, in sy	
Hæmatemesis	75	philis	. 21 1
Hæmaturia, Medicinal treatment o	f 204	Iodine, Tincture of, in diphtheria	. 143
Hæmoglobinuria, Effect of cold in Hæmoptysis, Cold air in	38	Iodoform in affections of Eustachian tube and middle ear	200
, Ligature of extremities in			. 306
,		,	

	PAGE (PAGE
Jambul in diabetes	100	Myrtol in phthisis 35
Jaundice	· 78	- Therapeutics of 307
Joints, Tubercular disease of	182	
Juniper berries as a dinretie	102	
Amilion possession and at summers and	*** ***	Naphthol in ocular therapeutics 272
	- /	Nerve-grafting 165
	1	Nervous diseases, general summary 48
Kehrer's operation for depress		Neuralgias and headaches 58
nipple	250	Neurasthenia 54
ARTON DE LA CONTRACTOR		New instrument for inducing labour 234
		Nitrites, Chemistry and pharmacology
Takana think shows Management	at 920	of 307
Labour, third stage, Management	01 230	
-, New instrument for inducing	904	
-, Pilocarpin in	234	
Lacerated perineum, Flap-splitti	209	Nux vomica in cardiac failure 9
operation for	228	
Lacrymal obstruction, Treatment Lactic acid in laryngeal phthisis	of 271	Obesity 88
Lactic acid in laryngeal phthisis	293	Obstructions of nose and pharynx in .
in tubercular diarrhœa	*** 40	relation to ear diseases 286
Lactose as a diuretic	103	
Lanolin ointments, New	266	Occipito posterior positions, Manual
Laparotomy in peritonitis	249	
- in a stroffexion of uterus	222	Esophageal spasm as a masal reflex
Laryngeal carcinoma, Treatment o	t 291	
- phthisis, Lactic acid in	293	Operations of the gall-bladder , 164
Laryngismus stridulus, Antipyrin		— on the head 153
Lateral curvature, Treatment of	174	- on laryux by through-illumina-
Land solie	00	tion 292
Lead colic	261	Ophthalmic troubles, Reflex, of masal
Leprosy	004	origin 209
- Surgical treatment of	200	Osseous growths of ear, Treatment of 280
Ligature of innominate artery	165	Ossicles, Removal of the 280
Linseed-oil as an expectorant	23	Otomycosis of external auditory canal 284
Liquor antisepticus, Jeyes'	302	Otorrheen, Borie acid in 284
Lister's graduated sounds in ureth	ral	—, Creolin in 281
stricture	205	Oxygen in albuminuria 93
Liver, Acute yellow atrophy of	79	- in diseases of respiratory organs 24
- Cirrhosis of in	77	O The Land of the
Locomotor ataxia, Suspension tre	eat-	and the state of t
ment of	49	Ozone in phthisis 36
Loreta's operation for stricture		NAME OF TAXABLE PARTY.
pylorus	nr 161	Paludism, Influence of, on pregnant
Lupus, Treatment of	260	women 231
angual areas are an		Pancreas, Cysts of 163
		women 231 Pancreas, Cysts of 163 Paracentesis pericardii 14
Male fern, Extract of, for tenfa	87	Paraldehyde, Action of 309
Menual treatment in gynecology	000	The state of the s
Massage in diseases of the eye	000	— in cardiac distress
	01	Passive respiratory movements, The-
New works on	280	rapeutic value of 39
Mastoid, On opening the	00	Penis, Total extirpation of, for cancer 163
Meat food	100	Perchloride and proto-iodide of mer-
Mercurie iodide in scarlet fever		curv in syphilis 213
Mercury, New preparation of, for	By-	
philis	216	Pericardial adhesions, Rational treat-
Menthol in pruritic affections	265	ment of 15
Methacetin as an antipyretic	135	Pericarditis 13
- Chemistry of	306	Pericarditis, purnlent, Treatment of 13
Middle ear, Local treatment of gra-	nu-	Perineal urinary fistula 201
lations of	281	Perincotomy for tumours of pelvic
Milk diet in albuminurla	93	connective tissue 227
- in cardiac disease	9	Peritonitis 33
- in pleurisy	41	- Suppurative, treated by incision 193
Mineral waters of Bath	118	Pertussis, Remedies for 122
Minor operations, How to make pa		Phenacetin as an antipyretic 134
less	284	Therapeutics of 810
Morphine and codeine in diabetes	0.0	—, Therapeutics of 810 Phenacetins, The
— — Therapeutic value of	307	Philosophy as a cardiac remedy 12
	44.4	Phosphate of soda, Influence of, on
Marshinomania Comina in	-	excretion of uric acid 117
Morphinomania, Cocaine in	*** 02 905	Phthiais Associate for night awasts of 35

INDEX TO SUBJECTS.

n.ar l	
PAGE Phthisis, Antipyrin, antifebrin, phe-	Quinine, Subcutaneous injections of,
nacetin in 36	in fever 133
—, Balsam of Peru in 87	
—, Calomel in 37	Radius, Subluxation of head of 193
—, Compressed air in 41 —, Creasote in 31	Renal calculus, Antipyrin in 105
—, Creasote in	Resection of styloid process in case of
— cured by erysipelas 40	dysphagia 290 Residual urine, Symptomatic indica-
, External use of chloral in 38	tion and therapy of 199
—, Functions of stomach in 39	Resorcin in diphtheria 142
—, Guaiacol in 83 —, Hot air in 29	Respiratory chair 39
, Hot air in 29	Retention of membranes, Treatment of 244
- Hydrogen sulphide injections in 30	urine -hæmaturia 205 from prostatic enlargement 196
, Intrapulmonary injections in 34	Retina, Separation of, operative treat-
-, Intrapulmonary injections of	ment 277
creasote in 34	Rheumatic fever, Pain in the heels
—, Iodide of mercury in 37 —, Myrtol in 35	after 111
, night sweats, Sulphonal in 38	Rheumatism, Chronic articular 109
	Rheumatoid arthritis 111
Taunin in 98	Bingworm of nails, Treatment of 260 Treatment of 259
—, Inymoi in 35	,
——, warm moust an m 30 i	Saccharin, On the effects of 311
Pilocarpin in alcoholic amblyopia 274 —— injections for deafness 287	Salicylate of mercury, Effect of, on
-, Value of, in pregnancy and labour 234	syphilis 215
Placenta prævia, Diagnosis of, by pal-	of soda and salol in pleurisy 41
pation of abdomen 236	Salicylic acid in scarlet fever 139
Pleurisy, Caffeine in 41	Saline cathartics in pleurisy 41
—, Milk in 41	Salol in renal calculus 105 Scabies, Treatment of 258
—, Salicylate of sods and salol in 41	Scabies, Treatment of 258
—, Saline cathartics in 41 Pleuro-pneumo-thorax, Sterilised air	Scarlatina maligna, Salicylic acid in 121 Scarlet fever, Mercuric iodide in 139
in 42	, Salicylic acid in 139
Pneumonia, Contagiousness of 26	Sciatica 57, 112
, Coloroform in 25	Sea air, Influence of, on disease of ear 286
—. Ios in 26	Secretion of pancreatic juice, Influence
, Large doses of calomel in 25	of drugs on 78
, of digitalis in 24 , lobar, Treatment of 24	Shape of skull, Influence of, on the temporal bone 284
—, Wet cupping in 25	Slow pulse, permanently, Therapeu-
Pneumo-thorax, Treatment of, by per-	tics of 11
manent fistula 42	Sodium chloride as a diuretic 102
Pocket flask for sputa of phthisis 33	- dithiosalicylate II., Effects of 312
Polypi of middle ear, Electrolysis for 283	Sounding for stone, with enlarged
Porro's operation, Simplification of 241	prostate 201 Sozoiodol, Chemistry and value of 313
Post-partum hæmorrhage, Atonic 243 Pott's paralysis treated by suspension 187	Chartelina O
Prolapsus ani 191	Spasmodic cough, Antipyrin in 23
Prostatectomy 198	Spine, Surgery of 156
Prostatic dilator, A new form of 197	Spicen, Excision of 162
Prostatitis, Tuberculous 203	Sputa of phthisis, Pocket flask for 33
Psoriasis, Treatment of, by iodide of	Squatting posture as an aid to me- chanism of labour 238
potassium 258 Puerperal eclampsia, A microbe for 238	chanism of labour 238 Sterilised air in pleuro-pneumo-thorax 42
———, Treatment of 23?	Stomach, runctions of, in phthisis 39
fever 245	Stomach, Functions of, in phthisis 39 Stone in male bladder, Treatment of 200
, Microbes and 247	Stricture, deep urethral, Radical cure
Pulmonary abscesses and cavities,	of 206
Aspiration of	, urethral, Lister's graduated sounds in 205
—— cavities, Incision and drainage of 46 —— consumption and neurosis 40	sounds in 205 ————, Section and drainage in 205
- surgery, Experimental contribu-	Strictures of esophagus, Retrograde
tion to 47	dilatation of 161
ventilation 81	Strychnine injections in some forms
Pyrodin as an antipyretic 185	of paralysis
(hydracetin), antipyretic pro-	Styloid process, Resection of, in dys-
perty 81	phogia 2:0

THE YEAR-BOOK OF TREATMENT.

PAGE	PAGE
Subluxation of head of radius in child-	Tuberculosis of children, Arsenic and
ren	digitalis in 129 Tuberculous prostatitis 203
Sucking and intermittent lever 251	Tuberculous prostatitis 203
Suprapubic operation 198	lumours of pelvic connective tissue,
Sulphonal, injurious elects of 313	
in night sweats of pathisis 35	Tupelo dilators in laryngeal stenosis 294
S ppurating omental cysts, Excision of 103	Tympanum, Painful hypersemia of 280
Suspension, Dangers of 52	Typhlitis, The surgical treatment of 158
—, for Pott's paralysis 187 — treatment of locomotor ataxia 49	Typhoid fever, Benzoate of sods and
	naphthol in 137 Typhoid fever, Thymol in 137
Symphysis pubis, Puerperal suppura-	, Treatment of, by naphthalin 136
tion of 249 Syphilis, Curability of 208, 209	, Freatment of, by Daphtmann 150
—, Diagnostic value of iodides in 211	
— in children, Treatment of 218	77 1 22 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
—, Iodide of potassium in 212	Umbilical hemorrhage in infants 130
, A new preparation of mercury in 216	Uramia, Morphine in 94 Ural, a hypnotic 314
—, Perchloride, proto-iodide of mer-	Urai, a hypnotic 314
currin 913	Urethral stricture, Lister's graduated
cury in 213 , Salicylate of mercury in 214, 215	sounds in 205
, So-called abortive treatment of 210	Uric acid, Influence of phosphate of soda on excretion of 117
-, subcutaneous injections of mer-	Trinera calculus Goographical dia
cury in, Dangers of 216	Urinary calculus, Geographical dis-
, Treatment of, at present day 2:1	Tring Transfirence of 904
Syphilitic affections of eyes, Treat-	Potention of 205
ment of	tribution of
ment of 215 — deafness 285 — headache, Treatment of 215 Syringing in otorrhœa, Dangers of 285	tumours Treatment of he
headache. Treatment of 215	electricity 222
Syringing in otorrhops, Dangers of 285	Uterus, Extirpation of preguant can-
	cerous 231
	- retroflexed, Laparotomy for 222
Tænia, Extract of male fern in 87	, Suturing, to abdominal wall 221
Tannin in phthisis 36	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Tarsotomy, A splint for use after 169	
Teneriffe as a health resort 27	
Terebene in affections of respiratory	Varicocele, Radical treatment of 207
organs 23	Variola, Carbolic acid in 138
Tetanus oi	
Thio-resordin, a substitute for iodo-	Vaso-dilators 11
form 306	Verical calculi in boys 188
Thiol as a substitute for ichthyol 305	— disease, Electric light in 207 — irritability 202
Through-illumination, Operation on	—— irritability 202
larynx by 292	
Thymic acid in diphtheria 142	
Thymol in phthisis 36 — in typhoid fever 137	Warm moist air in phthisis 30
— in typhoid fever 137	Wasting diseases of children 128
Tinnitus relieved by ether fumes 283	Weakness of mind after typhoid,
"Traumatic epilepsy," Trephining for 155	Women, Introductory to Diseases of 220
Tubal disease, Operative treatment of 226	Women, Introductory to Diseases of 220
Tubercular disease of the joints 182	Wound-dressings 139
- of testicle and early castra-	Wound, penetrating, Abdominal sec-
tion 208	tion for 160



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